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ORIGINAL ARTICLES

THE POSSIBILITIES OF THE *X*-RAY IN THE DIAGNOSIS OF EYE, EAR, NOSE AND THROAT CONDITIONS.*

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The localization of foreign bodies in the orbit was probably the first field of usefulness for the *x*-ray in the specialties under discussion. In November, 1895, William Conrad Roentgen made the announcement of the discovery of the *x*-ray. It was in March, 1896, that a Doctor Van Duyse made a report before the Medical Society of Gand, in which he related experiments upon rabbits. He used small sensitized plates, which he introduced within the conjunctival sac. I have found a record of the application of the Mackenzie-Davidson method of localization for this purpose as early as January, 1896. (British Medical Journal, January 1, 1896.) Many others now busied themselves with this problem of the location of a foreign body but it was the apparatus devised and reported by Dr. William M. Sweet, in 1897, that has served as the model for many other inventors. Before entering upon a description of this and other apparatus, I desire to mention two other extremely practical methods of eye localization. The fluoroscopic method: in which the shadow of the foreign body is produced upon a fluorescent screen and the excursion of this shadow is dimly shown when the eyeball is moved during the examination. While I have seen foreign bodies located in the eyeball by this method, I do not recommend it, as it necessitates an unwarranted exposure of the patient and the operator.

Another method that has been in use for many years, introduced by Dr. Alban Köhler, of Wiesbaden, calls for the taking of a lateral view

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of the head, focusing on the orbital area. This first negative gives the record of the presence or absence of a foreign body. A second negative is taken and during the exposure the patient is ordered to move the eyeball from a position in which the sight is directed downward to the opposite direction, *i. e.,* upward. This second negative will then show in a majority of cases whether the foreign body is within the eyeball or within the tissues of the orbit, *i. e.,* if the foreign body shows a blurred shadow corresponding to the excursion of the eyeball, we are to conclude that the body rests within the eyeball. This is a practical method and is recommended where the *x*-ray operator has not one of the more exact apparatus for the location of the foreign body by the stereoscopic method.

The stereoscopic method of localization was the basis of the Sweet apparatus. In this method, the location of any foreign body is studied in its relation to two opaque objects of known location. In my laboratory I have used the Sweet-Bowen apparatus, which embodies the original invention of Sweet with modifications by Dr. Chas. Bowen of Columbus, Ohio. I shall take pleasure in demonstrating this method. Dr. Sweet has recently modified and improved his apparatus, but I feel that the Sweet-Bowen method has proved so satisfactory that I shall be content until some newer and simpler principle be discovered.

In the Sweet-Bowen apparatus, the first negative is taken with the tube directly above the two small balls. The second negative is taken with the tube a few inches nearer the body of the patient and tube angle slightly tilted toward the balls. The head of the patient has been fixed securely and the relation of the balls to the pupil of the affected eye is not changed for either exposure. After the negatives are developed, the relation of the foreign body to the small balls is plotted on the chart arranged by Dr. William M. Sweet.

I shall merely mention, *en passant,* the methods of Fox and Born, both of which involve the use of a thin sheet of vulcanized rubber or celluloid for the imbedding of fine wires, and shaped to accommodate themselves to the contour of the anterior portion of the eyeball. These are introduced after cocainizing the conjunctiva, and the relation of the foreign body to these wires is determined in the finished negative. Also the method of Cowl, which involves the location of the shadow of the foreign body upon one negative, laterally, and one, in which the film is placed within the mouth of the patient and the tube is placed above the eye, perpendicularly. The method of foreign-body localization by Fürstenau, is interesting, in this a double focus tube is used and the shadow of the foregn body, in its relation to two fixed opaque objects attached to the body of the patient, is charted upon the resulting negative by a specially devised compass instrument. I have seen this method used to advantage in locating foreign bodies in parts other than the eye.

Other than the location of foreign bodies, I do not think at present of any other condition of the eye-ball itself in which the *x*-ray could be of diagnostic assistance. But in the diagnosis of orbital tumors, fractures

of the orbit, and tumors of the brain, or the bone tissues which produce pressure, it is of importance. Tumors which involve the hypophysis and give us pathological shadows of the sella tursica, with probable pressure of the tumor mass upon the optic commissure, can be demonstrated to advantage.

I shall now take up the province of the *x*-ray in diseases of the ear. First and foremost, I would speak of the diagnostic value of the *x*-ray in the mastoid conditions. The normal shadow of the mastoid shows the cells and structure. The relation of the lateral sinus to the mastoid can be charted upon the roentgen negative. This can be of great assistance to the operating surgeon in cases of mastoid abscess, for is it not far better to know the distance of the lateral sinus from the exterior wall of the mastoid than to chisel into an unacquainted field of broken down tissue? Dr. Sidney Lange, of Cincinnati, reported the results of his studies in this new work at the last meeting of the American Roentgen Ray Society, and it was also reported to the otologists by Iglauer, so if I repeat facts that are too well known to you, I beg your indulgence. Up to the time of Dr. Lange's studies the roentgen examination of the mastoid region consisted of negatives taken in the posterior-anterior position or vice versa, for a comparison of the shadow values of the two mastoids in the detection of a suppurative condition in either or both mastoids. Also lateral views of the mastoid region were made of the two sides of the head, thus affording a comparative study of the two. These examinations are satisfactory in the diagnosis of suppurative processes, but it was the new position of the tube and the plate that produced the negative that enabled the operator to determine the relation of the lateral sinus to the mastoid region. The technique for this position necessarily is difficult and must be determined by accurate measurements, in order to have the views of the two sides correspond for comparison.

Lange states that: "Since the external auditory meatus and the groove for the lateral sinus are readily identified upon the skiagram, the distance between these two landmarks may be measured approximately, always allowing for slight oblique distortion, and thus the area of the operative field may be determined. This is of no small consequence, as the choice of operative procedures may depend upon whether there is a forward lying sinus or not. Three types of normal mastoid processes are recognized by Politzer: the pneumatic or cellular type, the diploetic or spongy type, and the mixed types. The pneumatic type is extensive, has numerous large and small cells, and the lateral sinus is usually placed some distance back of the external auditory meatus, giving plenty of room for the usual operative procedures. In the diploetic or dense types, the mastoid process is small, has fever and poorly developed cells, and the lateral sinus lies nearer the external auditory canal. In these cases there is more danger of chiseling into the lateral sinus, and more caution is necessary in operating." The presence of cells in the base of the zygoma may also be shown.

In the diagnosis of pathological conditions of the mastoid region, aside from the anatomic points to be derived from the *x*-ray negatives, I might enumerate some characteristics. In the mild types of mastoid inflammation there is still a great field for research before we can definitely state whether the changes in mastoid pathology minus bone destruction can be shown upon the negative. In chronic inflammation, the *x*-ray gives practical and valuable information, showing sclerosis and haziness of the mastoid cells or obliteration of the mastoid cells. Then we have that class of cases with general or localized septic symptoms originating in a chronic necrotic mastoid. It is obvious that the *x*-ray would help to clear up the diagnosis in these.

I would not pass over lightly the value of the *x*-ray and its pre-eminent position in the diagnosis of the presence of foreign bodies in the external auditory canal, or the location of bullets in this region. The inflammation and swelling of the tissues, which interfere with inspection and clinical examination, does not in the least prevent the accurate location of a foreign body of almost any character; furthermore, the worry and pain of the patient is not increased by the *x*-ray method.

The nasal and accessory cavities: In my discussion of this field I have drawn largely from the work of Dr. E. W. Caldwell, of New York; the new Text-Book on Roentgen-Technik, by Prof. Albers-Schoenberg; personal study with Dr. Fedor Haenisch, of Hamburg, Docent Dr. Oertel of the Charite, Berlin, and Dr. Artur Schüller, of Vienna. The examinations in my laboratory have followed the principles of these men and have proved delightfully satisfactory.

I take it for granted that it is not necessary to reiterate to this audience the value and ease of location of foreign bodies in any part of the body, and especially within the cavities or orifices of the body where their location by inspection or transillumination necessitates the subjection of the patient to pain and discomfort and is of doubtful consequence. In this field, the *x*-ray stands alone and undefiled.

Negatives taken in the posterior-anterior position with the frontal sinuses in close proximity to the photographic plate, give us shadows that aid us in the outline of the frontal sinuses, ethmoidal sinuses and the antrums of Highmore. The outline of the septum and nasal bones is plain. We are able to draw conclusions as to the extent and pathological condition of the frontal and ethmoidal sinuses and the antrums of Highmore. The shadow of a pus-filled sinus is easily distinguished from that of the normal of the opposite side, or, if both are involved, there will be the absence of the normal transparency of these areas upon *x*-ray negatives.

Negatives of the lateral view of the head give us the depth of the frontal sinuses and the shadows of the sphenoidal sinus. The superposition of the shadows of the frontal, antral and ethmoidal sinuses, in the lateral view, require a careful estimation and interpretation of their

values. But after considerable study has been given to these shadows, it is easier to make a correct estimate of their values.

Just as in the contemplation of operative procedures upon the mastoid, so we may estimate the extent and amount of involvement of frontal sinus pathology by the roentgen method. The shadows of this area are conclusive diagnostic values.

The antral shadows, while more complicated than the frontal, are more than a mere aid in the diagnosis of septic and inflammatory conditions. Will you pardon me if I again repeat the absence of pain and discomfort to the patient in these *x*-ray examinations as compared to the examination of cavities by transillumination? It is not my intention to discredit the transillumination method of examination, for it has its values, but we are able to draw the same conclusions from this pleasanter *x*-ray method.

The x-ray negative of the facial area may also disclose certain anatomical anomalies, such as the presence of a sinus in the lower border of the orbit, or the absence of a frontal sinus, or an obliterated antrum. I saw a case that presented no signs of inflammation but extreme pain beneath the orbit, which turned out to be an inflammation of an anomalous sinus.

Pharynx and larynx: I shall not discuss the presence of foreign bodies, but will present some slides later. However, I would like to mention some peculiar pathological conditions such as the presence of calcareous areas in the tonsils and Stenson's duct, which will show up on *x*-ray negatives. These deposits are usually so easily determined by palpation that they are rarely referred to the roentgenologists for such diagnosis, but are found in the course of examinations for other conditions. Calcification of the thyroid and cricoid cartilages will give characteristic shadows. Another condition which could be cleared up if the unpleasant and distressing bronchoscope was impossible, would be the determining of the area of involvement of a tracheal constriction or cancer with the air space of the trachea showing up to a lessened degree.

The anatomical position of the hyoid, thyroid and cricoid cartilages, and the position of the epiglottis, may be determined by the roentgen negative. The patient with throat symptoms, but pathological changes in the vertebræ of the cervical region, is frequently seen by the laryngologist. We are able to study out these bony changes with ease by careful roentgen examinations in both the anterior-posterior, lateral and oblique positions. Arthritis rheumatica, with its attendant bony changes and exostoses in the vertebræ, may be classified under this heading. The deposit of calcareous material and arteriosclerosis of the carotids and similar pathological conditions of the glands of the neck and mouth, are also to be mentioned.

Dr. Max Scheier, of Berlin, has contributed a monograph upon the "Use of the *X*-ray in the Study of the Physiology of the Speech and Voice." I feel that this subject warrants a special paper as I have now

extended my paper beyond my original intention. Eykman also published, in 1908, an article upon deglutition, in which he made many observations upon the positions of the hyoid bone and the adams apple in their relation to throat physiology. His roentgen examinations were made by cinematographic pictures, the first on record (1901). I feel that up to the present time I have not given this subject enough study to make an intelligent report to you who are so well grounded in throat anatomy and physiology. I shall, therefore, withhold a report upon this until I have given more time to translation and study.

There is a possible field for the *x*-ray in determining the possibilities of an individual as regards his fitness, anatomically, for voice culture. We know that the resonance of a voice depends upon the use that the singer makes of the accessory sinuses. Therefore, if the anatomy of these cavities be not normal in an individual or voice student, and there did not seem to be the ability of such cavities or sinuses to ever approximate a size to insure sufficient resonance, it would be a blessing to know this before years of study and application had been expended uselessly. While it is quite possible to develop a sinus just as it is possible to develop a muscle, it would be folly to attempt to put an accessory sinus where there was a congenital absence or a pathological sclerosis.

In closing, permit me to present the following outline of the possibilities of the *x*-ray in your specialities:

1. The *x*-ray stands preëminent in the location with exactitude of foreign bodies in the eye, ear, nose and throat.

2. The *x*-ray is a valuable assistant in the diagnosis of the pathological changes in any of the bony tissues of the ear, orbit, nose and throat, whether this change be a necrosis that is clearly and unmistakably recognized, or whether it be the presence of an exudate that alters the density of the shadows of a part.

3. The *x*-ray gives us definite information regarding the anatomy of those cavities which cannot be obtained in any other way than through operative procedure.

4. The *x*-ray permits us to study the physiology of speech, singing and deglutition.

5. By the process of diagnosis by exclusion the probability of sinus involvement will be excluded, where we have pains of a neuralgic character.

6. The *x*-ray serves as an assistant in an operative procedure looking to the extraction of a foreign body from a sinus, or cavity, or orifice, by noting that the instrument used to grasp the foreign body is actually attached to such body. This later service is best afforded by the fluoroscope, thus insuring a vivid picture of operation in progress.

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SOME REMARKS ON DISEASES OF THE GALL-BLADDER AND GALL DUCTS.*

By Robert M. Funkhouser, M. D., St. Louis.

The subject of diagnosis and treatment of diseases of the gall-bladder and gall ducts is one of the most difficult and most important in medicine. That diseases of these structures produce death in a very great number of cases—far greater than is appreciated—there can be no doubt.

Diseases of the gall bladder and gall ducts may or may not be associated with gall-stones, which are not of primary but of secondary importance, in so far as they are not the primary factors of the disease. Inflammation of these structures is partially explained by the theory of micro-organisms, the presence of which acts in a determining manner. The same general causes are present here as where calculi form, which as yet are not fully understood. Calculi may be either in the bladder (gall), hepatic, cystic or common ducts. The infection of the micro-organisms may be either through the portal vein, or by the intestinal tract. Naunyn has shown the invariability of the infectious origin of gall stones; they are merely an incident of the disease.

The first essential to diseases of the gall bladder and gall ducts is an impediment to the outflow of bile, either from the ducts, bladder, or common ducts. Stagnation is usually followed by infection, with an increase of mucin and chlolesterin; or to express it more conservatively, with the infection there is a slowing or stagnation of the outflow of bile, with an increase of mucin and chlolesterine, an increased amount of the latter being formed as age advances. With the exception of epithelium and foreign bodies, every substance which enters into the composition of gall-stones is to be found in solution in normal bile. If the bile remains healthy, if the mucous surfaces of the ducts and bladder remain normal and there is no occlusion nor slowing nor stasis of the bile, there will be no inflammation, no deposit; but should the patency of the tubes and bladder be affected for any length of time, then the bile becomes changed and deposit follows. But it is not necessary for stones to be present to cause many of the symptoms peculiar to the formation and presence of stones, as where catarrhal inflammation may be induced in the mucous membrane of the bladder and the fluid contents of the organ so increased in quantity and so altered in quality that change or decomposition takes place. That there may be other factors, time and study in the future may decide.

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Occlusion of the cystic and common duct, and infection of the bile in the gall-bladder likewise cause similar symptoms, but without the presence of calculi. They are by no means necessary to explain the symptoms present.

The usual *symptoms* in inflammation of the gall bladder and ducts are pain, tumor jaundice; one or more may be absent.

The pain is not always characteristic, as it may be and has been mistaken for that of gastric ulcer, appendicitis, renal colic, movable kidney; certain pains, such as may be present in tabes, inflammatory adhesions in the region of the pylorus and duodenum, aneurysm of renal artery, and other rare conditions (Brewer, 1904).

There may be no appreciable tumor, but when present, may consist of accumulations of mucus (hydrops), (2) accumulations of bile with or without calculi, (3) empyema, (4) cholecystitis with local inflammation, (5) malignant disease.

The jaundice may be temporary or continued. It is absent in from 80 to 90 per cent. of cases of cholelithiasis.

In some cases it is shown only by a slight icteric tinge in the conjunctiva, (after a time becoming chronic,) induced by catarrh, and may spread from the gall-bladder and cystic duct to the hepatic and common bile ducts and to the pancreatic duct.

The causes of jaundice may be due:—

1. Gall stones in common duct.
2. Interstitial pancreatitis.
3. Cancer or other tumor of common bile-duct or of papilla or of the duodenum near it.
4. Cancer of head of pancreas.
5. Cicatricial stenosis of common bile-duct from healing of an ulcer due to gall-stones that have passed.
6. Cicatricial stenosis of papilla, owing to healing of a duodenal ulcer.
7. Pressure from without, as in cancer or ulcer of pylorus or inflammation or growth of the lymphatic glands in close proximity to the bile-ducts.
8. Obstruction of the common duct by hydatid cysts or hydatid membrane.

Impaction of a gall-stone in the common duct is usually indicated by a distinct history of biliary colic, immediately preceding the onset of jaundice. Intermittent jaundice may, however, occur if a small gall-stone floats up and down in a dilated common duct, acting as a ball valve.

The pain radiating to the angle of the scapula behind and tenderness elicited by examination, is indicative of disease, especially in that method used by Murphy, known as Murphy's sign, referred to by Bishop so favorably. The most certain sign, however, is dependent upon finding them in the fæces, but not the masses nor detritus, which are frequently delivered to doctors by patients as such. The evidence of stones, in the ma-

jority of cases is circumstantial. The frequency with which mild but recurrent attacks give rise to pericystic and pyloric adhesions is not fully appreciated by the profession. Many of the attacks of the gall-bladder colic are caused by acute cholecystitis in the presence of ducts constricted by inflammatory swelling without the presence of stones. It is not an uncommon experience with surgeons to find, upon opening the abdomen, evidences of severe inflammation of the peritoneum in the neighborhood of the gall-bladder, with adhesions sometimes involving the stomach, liver, intestines, pancreas and gall-bladder and ducts, without the presence of stones in the gall-bladder or ducts. This is seen so often that great care should be exercised in making a positive diagnosis before operation.

Where the continuation of the following symptoms persist, it is characteristic of the existence of gall-stones in the common duct: 1. Jaundice of varying intensity, deepening after each paroxysm. 2. Ague-like paroxysms, characterized by chills, sweating and fever, followed by deepening of the pre-existing jaundice. 3. At the time of paroxysm pains in the region of the liver with epigastric disturbance. Sudden chills, with high temperature, followed by rapid decline, and a little temporary increase in jaundice, attended with moderate pain and often nausea, are pathognomonic of common duct stone. And it is in these cases that a second operation in common duct stone may be necessary, since hepatic stones may drift down into the common duct subsequent to a choledochotomy.

Acute impaction of stone in the common duct may require prompt operation. When a patient presents the history and usual symptoms suggestive of acute impaction in the common duct and has, in addition, evidences of progressive infection, such as persistent jaundice, intermittent fever and sweats, the only chance of salvation, is in immediate operation. And yet the mortality of operation in such cases is appallingly high, as in these cases there is often an acute hepatic infection.

The diagnosis of chronic interstitial pancreatitis has to be differentiated from gall-stones in the common duct, cancer of head of pancreas and cancer of liver and bile ducts. From gall-stones it may be made by the sequence of long antecedent history of spasms without jaundice and after a time by recurring pains with increase of the icterus associated with ague-like attacks. The absence of tumor, due to distended gall-bladder, is more common in gall-stones than in chronic pancreatitis, though in the latter the gall-bladder may be found contracted. In cholelithiasis and cholecystitis there is a tendency to constipation, whereas in chronic pancreatitis, the stools are bulky, pale and greasy, and there is a tendency to frequent motions, sometimes designated as diarrhœa. In chronic pancreatitis the pain, as a rule, is less than in gall-stones. In gall-stones and cholecystitis the pain is over the gall-bladder, while in chronic pancreatitis it is in the middle line and the gland can sometimes be felt.

Acute pancreatitis is frequently caused by impaction of a calculus in the diverticulum of Vater. It must not be overlooked that the reason

that calculi impacted in the diverticulum of Vater do not more often cause disease of the pancreas is because in two-thirds of the cases there is an accessory pancreatic duct (of Santorini), and in 10 per cent. of patients, the common duct and the duct of Wirsung empty into the duodenum by separate orifices.

In chronic pancreatitis, the pains radiate to the left or to the mid-scapular region. The presence of neutral fat in the stools and of the pancreatic reaction in the urine, both of which are important diagnostic points. Ascites may be present. The lymphatics are discrete and not massed, the pancreas is lobulated and smooth; in cancer it is craggy and nodular.

In cancer of the common duct, not infrequently associated with gall-stones, there is early persistent jaundice which becomes absolute. There is paroxysmal pain, the liver becomes enlarged, and a tumor can be detected, due to a distended gall-bladder. Anæmia follows, with *hemorrhagic tendency*, and later ascites appears with biliary toxemia.

In cancer of the head of the pancreas, occurring usually after 50 years of age, the onset is gradual, preceded by general failure of health, and when jaundice supervenes, is absolute and unvarying. There may be present a tumor of, but usually no tenderness of, the gall-bladder. The liver becomes enlarged, but no nodules palpable; there is a rapid loss of weight and strength; absence of fever; the stools are bulky, pale and there is absence of stercobilin. Deep jaundice, with distended gall-bladder is significant of cancer of head of the pancreas. Adhesions are usually absent in cancer of this organ.

In cancer of the liver, the enlargement is irregular with nodular feeling, rapid deterioration of health, less intense jaundice than in some other diseases (as cancer of the common duct), absence of fever, paroxysmal pain, and ascites.

G. R. Slade, of the London Hospital, says that malignant disease was present in 30 per cent. in which gall-stones have been found at the post mortem examination. It appears from his and other observations that gall-stones predispose very frequently to cancer. From the above observations, it is obvious that gall-stones should be removed before serious complications ensue, for, as a matter of fact, the removal of gall-stones and subsequent drainage of the gall-bladder has been followed by cancer very rarely, and only two cases have been recorded in the voluminous literature on the subject.

Treatment: What is the proper procedure in the treatment of these cases? It is agreed that there is no effective procedure for the dissipation or dissolution of calculi already formed, but that of operation. The same holds good in the treatment of certain conditions in inflammation of the gall-bladder and gall ducts with absence of calculi.

Two main operations obtain, viz: cholecystotomy, or cholecystostomy and cholecystectomy. The important question is to determine upon the correct operation in each given case. Operations have been divided

into two main groups: 1. Cases which should be operated upon between attacks of activity, either for drainage and for removal of stones if present, or the prevention of subsequent attacks and septic complications, and if stones are present, from their future growth. 2. Those in which there are adhesions that obstruct the duodenum and intestinal obstruction produced by a stone.

In deciding between extirpating and draining the gall-bladder, the comparative dangers of the two methods, the comparative efficacy of curing inflammation and of removing and preventing the occurrence of gall-stones, of the advantages of temporary drainage of the biliary passage, and of the possible necessity and increased difficulty of draining the passage at some future time (at a second operation), should be carefully weighed.

There appears to be a reaction against the teaching of the indiscriminate resort to cholocysectomy in those cases in which the gall-bladder is not irretrievably diseased. There are sound reasons why it should not become a routine operation.

It is interesting to note the opinions expressed by operators now and at different periods of their career. The same spirit of radicalism is seen in connection with operations upon the gall-bladder as has existed regarding other structures.

Where the operation is limited to the opening of the gall-bladder, the mortality is slight, less than 1 per cent., according to some authorities. The Mayos report 1,000 cases of operations on gall-gladder and bile passages; 50, or 5 per cent. died; 573 cholecystostomies, 2.46 per cent.; 186 cholecystectomies, 4.3 per cent.; 137 benign common duct operations, 11.7 per cent.

According to the statistics given by Mayo Robson, the death rate in cholecystostomy has been 1.47 per cent.; in cholecystectomy, 1.62. But the statistics are not uniform. Drainage will usually clear up jaundice and permit the parts to return to their normal condtion, even when the bile ducts have become infected. An interstitial pancreatitis and chronic jaundice due to compression of the bile-ducts, can be more efficiently treated either by cholecystotomy or -cystostomy if the gall-bladder is present. Even if the gall-bladder is removed, there is no certainty that stones will not form in the common duct (which may become dilated), nor in the hepatic. Bile is constantly being formed in the liver at the rate of 30 c.c. per hour. In 24 hours 72 c.c. of mucus is added to the bile in the gall-bladder. The loss of the gall-bladder may lead to dilatation of the common duct.

Cholecystotomy (tostomy) must be considered the safe operation, the cholecystectomy being reserved for certain cases in which cholecystostomy may be expected to furnish a partial or complete failure. In some cases long continued drainage, with proper local treatment, is indicated, extending over a number of weeks.

J. Bland Sutton is one of the strongest advocates of cholecystectomy

under all circumstances, but I cannot agree with him, Woods Hutchison, Roswell Park, and others, who believe the gall-bladder has no function and is a useless and comparatively functionless organ, a vestigial structure, analogous to the vermiform appendix, and that it should be removed under all circumstances when diseased.

It is proper in old contracted, enfeebled and useless gall-bladders, and in some cases where the gall-bladder is thickened and inflamed, or even gangrenous, or if it is much dilated, or if there is hydrops or perforation. Other things being equal, all cystic gall bladders should be removed, and especially when a stone is impacted in the cystic duct, as not infrequently a stricture may follow removal, thereby interfering with the escape into the common duct of the normal secretions of the mucous membrane, thus giving rise to colics or an external mucous fistula. The surgeon, however, should be sure the deep ducts are free from obstruction.

Empyema of long standing with the cystic walls irretrievably diseased, requires cholecystectomy. In cases of doubt, cholecystostomy is preferable.

The increased difficulty of secondary operation in cases where the gall-bladder has been already extirpated, is an argument in favor of cholecystotomy.

Deaver gives his opinion that cholecystectomy should be done in:

(1) Hydrops with obliteration of the cystic duct.

(2) Malignant growths.

(3) Calcareous degeneration, gangrene, and perforation of the gall-bladder.

(4) Chronic empyema, and certain kinds of traumation.

He is constrained to say that the more gall-bladder surgery he does, the less inclined he is to remove the gall-bladder.

Patients with an enlarged liver bear operations better than those whose liver is atrophic. The size of the liver in cases of stone in the common duct should be watched. The same applies to small gall-bladders. Patients with small gall-bladders bear removal badly. Patients with extreme jaundice and subcutaneous hæmorrhage will nearly always bleed to death from capillary oozing.

As a rule, gall-bladders which are found to contain bile at the time of operation, may be drained. Where no trace of bile is found in the biliary passages in obstructive jaundice but a clear liquid, the case is hopeless. Gall-bladders which are suspiciously thick and hard, should be excised. Symptoms of common and liver duct infection call for drainage of the gall-bladder. The most common cause of death, where the gall-bladder alone is involved, has been a descending infection of the common and hepatic ducts.

RECAPITULATION.

1. The very common occurrence of cholecystitis and cholangitis, with symptoms very similar to those present in stones of the gall-bladder and ducts.

2. The deprecation of removal of the gall-bladder as a uniform and routine procedure.

3. The advisability of drainage, and, in some cases, quite lengthy (weeks or months).

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WHAT MEDICAL INSPECTION OF SCHOOL CHILDREN MEANS TO THE PUBLIC.*

By C. W. Tooker, M. D., St. Louis, Mo.

To those of us engaged in the practical solution of the problem of securing the best health conditions in the schools, and to those interested in raising health standards in general, the necessity for a paper of this nature is apparent.

Only by a regular, systematic examination of the children in the schools, and by repeated suggestions and recommendations regarding ascertained abnormalities, can we secure for the men and women of the future that health and happiness so essential to culture and efficiency.

Sanitary science has taken its proper place in the affairs of men and we may reasonably expect that hygienic conditions will obtain in public buildings, and soon also in dwellings. Sociologists everywhere are endeavoring

*Read before the St. Louis Medical Society, December 20, 1909.

to convince men and women of the necessity of hygienic surroundings and of normal life habits.

Boards of health and boards of education recognize the importance of medical inspection of schools for the purpose of excluding pupils ill of contagious diseases. There is no need of further argument to establish the fact that schools regularly inspected are freer from exanthematous and other contagious diseases than are schools not so inspected. But enough attention has not been given to the physical and mental abnormalities of children during that period in life when most can be accomplished, namely, during the first two decades. Correction of abnormalities early in life are more easily accomplished and promise more certain and permanent benefits than at any other time.

What business can a community possibly find more profitable? Our insurance companies are writing millions of dollars of insurance on lives that will be unnecessarily shortened by reason of abnormalities unrecognized and not corrected early in life. Why not begin to insure our physical condition in childhood? We know that many abnormalities of children result in impoverished blood, lowered resistance to infections, over-tension of special senses and early degenerations. One can easily see what immense returns would accrue to a community by the investment of moderate sums to prevent such deterioration of physical and mental power. The wealth and stability of a nation must depend, in the final analysis, on the physical and mental stamina of its citizens, and the children of to-day will soon be active integral parts of the nation. The more one thinks on the matter the more he wonders that inspection of school children has not been insisted upon earlier. One of the objections to the regular examination of school children seems to have been, that it was an unwarranted intrusion in matters purely personal to the parents. But that public work cannot be an intrusion which has for its only object the improvement of the health of future citizens, and which interferes with, or usurps the rights of no one.

The need for school inspection becomes more apparent the further we progress in the actual work.

We are now examining the children in the east end schools only.

General conclusions can be obtained of course only from a consideration of statistics from all schools throughout the city and in other cities. Such statistics have been compiled and are available for study. There is a surprising uniformity in these reports and the results of our examinations vary but little from them. Everywhere we find comparatively little attention given by parents to the physical condition of their children, and everywhere the need of examination by regularly authorized boards of inspectors is apparent. In our work we may classify parents into at least three groups: First, those who regularly employ a physician and have for some reason or other not been informed as to physical abnormality in their children. They generally do not resent any examination and are usually glad to have such abnormalities corrected. Second, those parents

who are rather indifferent as to the real health of their children, providing they do not suffer from any of the usual well-known "dangerous" diseases. It is rather difficult sometimes to convince these parents of the necessity for correcting ascertained abnormalities; but they can be convinced. It is in these instances that the family physician, if capable and interested, or the school nurse, can accomplish most. The latter can explain carefully to the parents, preferably in their homes, the value and necessity of medical or surgical attention. Third, those parents to whom children are accidental, unnecessary, and almost utterly neglected. With them little can be accomplished. I have spoken at length about parents for the reason that we must depend upon them, finally, for results, and any system of examining must make provision for following up cases of manifest abnormality or deficiency. The examiner's recommendation secures to the child medical or surgical attention in many instances, but we feel that we could secure definite results in almost all of our cases if some one could personally enforce our recommendations in the homes of the children. It is the expression also of other workers in the field that only by a systematic follow-up plan can best results be attained.

In a general way, socially and economically considered, one may easily see the value to the public of such regular, systematic examinations of school children as will insure the best health and efficiency, but definite specific benefits may easily be adduced.

What can that child learn who is constantly annoyed by the blurring of letters in reading, by headaches, by sensitiveness to light, or who is always fatigued by close attention of any kind? What can one accomplish whose blood is continuously impoverished by deficient oxygenation and whose brain is anaemic or inundated with unoxydized products, Is it not of value to the public to produce mentally and physically alert youths to carry on its work and plans? In after years these physically defective children fall an easy prey to infections, to nerve exhaustions, and frequently become a burden to the State. With a lowered resistance and probably inherited tendency to abnormality, what chance has such a child in the modern struggle for existence? Whose is the responsibility, if not the general public's who neglected to provide a means of detecting and correcting conditions at the most favorable time? This matter has no mere theoretical interest. Distressing, even alarming conditions confront us and demand practical consideration. In a few months we will be able to furnish a report of practical significance; even now, after working scarcely four months, we have information at hand showing practical results in hundreds of cases.

I have tabulated in this paper the findings in the first examination of about 1150 pupils. Of course this report is merely illustrative and not truly statistical, but it shows the great and immediate need of examinations of children. These children all live in what we call the east end, and the percentage of abnormality is high. We must never forget, however, that the health and lives of these so-called lower classes are of

as much potential value and significance to the State as the health and lives of any of its children. On the one hand we do not know how great or how valuable any of them may become, and, on the other hand, we do not know what a menace, morally and physically, many of them do become unless freed of abnormalities which must unfavorably affect their outlook on life and their participation in life.

A brief explanation of the following figures is necessary. No abnormality has been scheduled which is not definitely demonstrable and which does not now, or which will not soon, affect the child's health unfavorably.

Among the eye defects recorded are, errors of refraction, trachoma, chronic conjunctivitis, astigmatism, strabismus and opacities of the lens and cornea. Among the ear defects are tabulated only acute or chronic otitis media purulenta. Among the throat abnormalities are recorded enlarged tonsils, adenoids and chronic pharyngitis. The condition of the teeth, both temporary and permanent dentition, has also been noted. These abnormalities are selected only as illustrative and do not represent the entire physical condition of the children examined. The abnormalities, however, do or will materially interfere with the progress of the child and prevent him attaining that education and culture to which he is entitled.

Partial Report of 1150 Examinations:

Eye (only)	113,	about 9%
Throat (only)	142,	about 12%
Eye and throat	71,	about 7%
Teeth (only)	182,	about 15%
Teeth and throat	143,	about 12%
Teeth and eye	146,	about 13%
Teeth, eye and throat	132,	about 11%
Normal	176,	about 16%

Another Arrangement of Report of 1150 Examinations.

Children with abnormal eyes	462,	about 40%
Children with abnormal throats	488,	about 40%
Children with dental caries or irregularities	603,	about 52%
Normal children	176,	about 16%

In view of findings of the above nature we may, I think, be pardoned for insisting on the necessity for examination of school children. It might be urged that these health conditions prevail only in the poorer districts, but that statement is not substantiated by general statistics although abnormalities are of course much more frequent among children of the tenements. Again, it might be said that mere examination, without treatment, has only an academic interest and does not accomplish any practical results. It is, of course, impossible for us to treat these conditions discovered by us. The various physicians in the city, the parents and the school authorities are not in favor of such a method of caring for

pupils of indigent parents. The report of the various clinics throughout the city, will, however, clearly demonstrate that practical results are being obtained and many physicians can personally vouch for the accuracy of such reports and for the amount of good already accomplished.

To return to the subject of the paper, how can any one question the benefit to the public of examinations of school children. The opportunities are large and the results very encouraging. The benefit to the public health will be apparent in a very few years. The immediate benefit is accruing daily in lessened contagious diseases among children and greater efficiency in educational work.

RETROPERITONEAL SHORTENING OF THE ROUND LIGAMENTS.[1]

By W. E. Dicken, M. D., Oklahoma City, Okla.

Alquie, of Montpieliar, France, appears to have been the genius who first conceived the idea and proposed a plan of shortening the round ligaments to correct downward and backward displacements of the uterus. He called the operation, which he had only performed on animals and the dead subject, Utero *Inguinoraphia,* which name was soon dropped for a shorter and better one.

The Academie de Medicine condemned the proposal of Alquie *in toto,* both as regards the possibility of permanently correcting uterine displacements, by shortening the round ligaments, and as regards the practicability of the operation itself. The Academie, however, passed a vote of approbation on Alquie for his prudence in never having attempted his operation upon a living woman.

Deneffe, with the courage of the recent graduate, was the first to attempt the operation upon a living woman, at Ghent, Belgium, in June, 1864. During his student days he had frequently practiced the operation successfully upon the cadaver, and immediately upon obtaining his degree, requested an opportunity to shorten the round ligaments upon the living woman, avowing his confident belief that he would be able to carry the operation to a successful conclusion, which was granted. In the presence of the masters of his day, the operation was undertaken upon a patient suffering from prolapsus, and he failed to find either round ligament, although he opened up the entire inguinal canal on both sides. The patient recovered from the attempt but the masters were called to account by the Hospital Commission, for permitting experiments upon patients committed to their care.

Thereafter the idea seems to have slumbered in the medical mind until December 14th, 1881. William Alexander, of Liverpool, performed the first successful shortening of the round ligaments, upon the living woman. This operation has since been known as the "Alexander Operation," with which we are all familiar, and I might add, has almost become obselete except in selected cases.

In considering the most rational treatment of the displacements of the uterus, it hehooves us

First: To assure ourselves of the certainty of the diagnosis.

Second: To determine accurately the degree of displacement.

Third: To ascertain whether the displaced organ is reducable.

Fourth: What are the apparent causes, and

Fifth: Is the disorder of place of the uterus associated with disease of the so-called uterine appendages?

So simple an element of diagnosis as the determination of the degree of the displacement, is important, for on its findings rests often times the decision of the urgency of local treatment. Is the uterus mobile and natural in this particular, or is it immoble and fastened in its abnormal posture? A satisfactory solution of this feature in diagnosis shapes materially our plan for management of the case.

Experience unmistakably proves that, while a displacement is occasionally the primary link in the chain of the pelvic disease, as a rule, the disorder of the uterus is only secondary to some recognized disease.

To secure success, in the treatment, this must receive proper consideration, and that too, early in the management. It may be an easy matter to replace the uterus, and possibly retain it in normal position, but such does not imply a cure or even a relief.

Taing this for granted then, we must take some time if need be, to ascertain whether it is some impediment in the circulation of the womb and its adnexa or from some other cause. If found that the trouble is of circulatory origin, then if this cannot be relieved by mechanical or medical means, some surgical measures must be resorted to.

In my experience I have found that the uterus need not necessarily be misplaced to a surgical measure, to cause quite a disturbance in the circulation, and on the other hand I have found an aggravated misplacement of the uterus and seen the woman enjoy perfect health, without any symptoms of a disturbed function. Now, it would be absurd to resort to surgical measures in this case, just because of the displacement alone.

A complete and accurate diagnosis then of the intrapelvic condition, uturine and parauterine, are paramount for success, and from it the deduction of a rational treatment; this is by no means always easy of accomplishment.

Fritsch, of Bonn, Germany, asserts that no so-called displacement is abnormal and that retroversion is not unnatural.

Perhaps there is no part of the whole field of the subject of uterine displacement which has excited so much interest and discussion, nor

which, even to-day, is so much *sub judice* as, what is the best surgical movement to be made in this direction.

The Alexander operation has its place in gynecologic therapy, but in my judgment its field is very limited; in fact, so very limited that I have adandoned it almost altogether and in its place have substituted a relief by mechanical supports, or other simple measures. In other words, any displacement which can be benefited by an Alexander operation or its modifications, can likewise be equally improved without any operation whatsoever; simply more time is needed. It is not worth while then, it seems to me, to give it further consideration.

In the desire to extend the use of the principle of the operation to women with diseased appendages or having adhesions, various intra-peritoneal operations have been invented, which are known by the name of the inventor.

The operation of suturing the round ligaments to the uterus, or in folding the intra-abdominal portion of the round ligament upon itself in various ways, as was done first by Wylie, Dudly, and Mann, has long since been abandoned and is considered now only a matter of history.

Webster and Baldy conceived the idea of shortening the round ligaments by piercing the broad ligaments beneath the Fallopian tube, seizing the round ligaments and drawing its free position through the opening in the broad ligament and suturing it to the posterial surface of the uterus at or about the level of the internal os. The operation has been stamped as a failure;

First, because it depends for its strength upon the weakest portion of the ligament.

Second, in order for it to be successful, we must have intra-peritoneal adhesions between the round ligaments and the posterior surface of the uterus; and

Lastly, it is anatomically incorrect as it fastens the round ligaments behind the uterus and at a point at least 2 cm. below that intended by nature.

Gilliam received the suggestion for his operation from Ferguson, who, in 1899, proposed to suspend the uterus by suturing the proximal third of the round ligaments to the anterior abdominal wall. Gilliam's operation has the merit of simplicity, but it divides the pelvic cavity into three segments (one external to each round ligament and one between the ligaments), and one of which may serve as a pocket in which the bowel may become incarcerated. This led Simpson in 1902, to propose the the retroperitoneal shortening of the round ligaments, at the meeting of the Southern Surgical and Gynecological Society.

At this meeting papers were also read by Doctors Ferguson and George H. Noble, describing other methods of shortening the round ligaments by means of abdominal sections and fastening the ligaments to the anterior wall of the abdomen.

Since 1902, the retroperitoneal shortening of the round ligaments, as

proposed by Simpson, has been carried out by various gynecologists in a sligthly different manner, so that the technic of the operation will now be described as it is performed by myself, giving full credit to Simpson for the conception of the principles, and Kelly, Mann, and Ill for the steps of the operation.

The patient is prepared the same as for any abdominal section. The abdomen is opened through the right rectus muscle a little to the right of the median line. An incision two inches in length is usually sufficient, but a much larger one is sometimes better, in order to see the complications met with.

Whatever complications are present must be delt with by the separation of adhesions, and the removal of anything that must be removed.

Then our round ligament is caught about 5 cm. from the cornu of the uterus, and provisional ligature of silk is passed under it. This point is about one-third distant from the cornu of the uterus to the internal abdominal ring. If the round ligament is long enough to permit, it is caught again at a point half way between the provisional ligature and the internal ring, and is held by means of an artery forceps.

This point is then sutured to the round ligament at tis junction with the uterus, by the means of two chromicized catgut sutures. If the round ligament is rather short this part of the operation may be omitted, and with the cases I have operated upon, the results seem to be the same. However, theoretically, it is much better to double the round ligament back and suture it to the cornu of the uterus. As a result of these sutures, the uterus is held forward, by that portion of the round ligament which runs through the inguinal canal. The proximal two-thirds of the round ligament now forms a loop, the middle of which is caught by the provisional ligature just described.

By pulling upon the provisional ligature, the anterior face of the broad ligament is exposed and the peritoneum covering is caught just below the round ligament, making a hole large enough to admit the index finger.

If the operator stands on the patient's right side, the next step of the operation is to open the sheath of the left rectus muscle. A blunt aneurysm needle with a long curve, is then passed between the aponeurosis of the external oblique muscle and the rectus muscle. The needle is passed under the sheath of the rectus to the outer border of the muscle, and then penetrates the rectus and passes beneath the peritoneum to the internal ring. The point of the needle is then made to follow the round ligament along the anterior face of the broad ligament to the rent in the peritoneum already described. This can be done much easier if your assistant will elevate, rather than make lateral traction, upon the abdominal wall.

When the needle emerges through the rent in the peritoneum, it is threaded with the provisional ligature and the needle is withdrawn, bringing with it the provisional ligature.

Now, all that remains to be done is to make gentle traction upon the provisional ligature and, by so doing, you bring the loop of the round ligament up through the broad ligament and the internal abdominal ring, beneath the peritoneum of the anterior abdominal wall to the outer border of the rectus muscle, then through the muscle and between it and the aponeurosis of the external oblique until it emerges in the abdominal incision. If the peritoneum should be dragged in front of the round ligament it must be separated to permit of its retraction. The loop of the round ligament is now sutured by two sutures of chromicized catgut, to the under surface of the aponeurosis of the external oblique. I usually prefer interrupted sutures.

The operator then passes to the opposite side of the patient and the other round ligament is treated in like manner. The abdominal incision is then closed, and the patient required to keep her bed for two weeks.

I cannot see how the retroperitoneal shortening of the round ligaments could interfere either with pregnancy or labor as the ligaments should develop during pregnancy as they do after the Alexander operation, and should not lead to dystocia. But my experience has been too short, and as it has only been two years since my first operation of retroperitoneal shortening of the round ligaments, I am unable at this time to give you my final conclusions upon these points, but I shall endeavor to do so at some future time.

HYPOKINESIS; ATONY OF THE INTESTINES; CONSTIPATION.

By James Whitman Ousley, M. D., Kansas City, Mo.

In spite of the very numerous researches on this disease, there is still no uniform agreement as to the true nature and the etiology of chronic constipation. Some authors claim that a motor insufficiency is the primary cause; other authors, as Schmidt, consider the question from a biochemical point of view, and accuse the secretion and intestinal digestion of being the principal pathogenetic factors. We would suggest to take the good of every hypothesis. In the first place, we have to remember that there is not such a nentity as constipation in pathology. The term constipation merely expresses the fact that the bowels do not move regularly. Now right here we must ask, what is a regular bowel-movement? It is true, we know by experience that healthy persons have, as a rule, one bowel movement a day. But we are not allowed to conclude from this empirical fact, than an individual is sick if the bowels do not move every

day. The only measure we have for stating a constipation is the periodicity and the quantity of the movement. If a person notices a change in this periodicity, if there is no regularity of bowel movements, we consider the person constipated. Furthermore, a person is constipated if the bulk of fæces, which amounts in the average up to 250 c.c. per day, is remarkably decreased.

If we deal with constipation in this article on hypokinesis, it is because the vast majority of cases depends upon a diminished peristalsis. We emphasize this in contradistinction to Schmidt, who claims that motor disturbances are not primary. There are, however, cases in which the intestinal peristalsis is increased, cases of hypokinesis, spastic conditions, which led many authors to establish the definite group of spastic constipation. There are, finally, mixed cases showing alternations of atony and spastic conditions. The etiology of atonic habitual constipation is, as the term habitual indicates, in the main neglect. Many young women have the bad habit of retaining the movements. It is furthermore the lack of exercise in people with a sedentary mode of life. Many people are so busy that they forget to spare the time necessary for these vital functions. The movements become gradually slow, the patient tries to secure a bowel movement with laxatives, the constipation will very soon become chronic and no laxative will help. This is the history of thousands of cases and it teaches us very nicely how important the kinetic or mortoric stimulus is for bowel movements, how much bowel movement and peristalsis are under the control of psychical impulses and nerve-stimuli. This is still more obvious if we consider that constipation is in an intimate relationship to mental and psychical conditions. In people with a lack of agility of mind, in stupid individuals, there is often a tendency to constipation. In fact constipation is the consequence of many nervous conditions. This leads us to the form of constipation designated as spastic constipation. In neurasthenic, and more frequently in hysterical individuals, the intestines, instead of being atonic are in a spastic condition. The spasm usually involves a part of the large intestine.

We must finally consider diseases of other organs, as being the primary cause of constipation. In the first place we have to mention the group of gastrogenetic constipation. The most various gastric disorders may give rise to a constipation. Atonic and catarrhal condition of the stomach, hyperchlorhydria, as well as achylia, cause constipation.

Diseases of the liver, of the heart, and of the kidneys, are often accompanied by constipation. In anæmia and chlorosis, the constipation is of course due to the poor peristalsis of the intestines.

Schmidt claims that constipation is due to a too thorough digestion and absorption of food in the intestines. According to his view the number of bacteria, which are living normally in the gut, is diminished. As a consequence, the products of decomposition are decreased and thence the stimulus for peristalsis is failing. This might be true to a certain extent. It would, however, be wrong to generalize this view.

Symptomatology: The subjective symptoms are in many cases not very marked. On the contrary there are numerous patients feeling quite well in spite of a constipation of several days. On the other hand, chronic constipation may give rise to a great variety of symptoms. The patients complain of headache, dizziness due to congestive conditions in the head. Or there exists insomnia and a mental depression, all kinds of indisposition of the heart. The patients also lose their appetite and complain of gastric symptoms as nausea, pyrosis, pressure after meals and other symptoms of indigestion. The local symptoms are mostly colic-like pains in the abdomen. The latter is often distended. In spastic conditions we can palpate contracted loops of gut, and can even feel the fæcal masses.

After some time the bowels may begin to move spontaneously and very often a profuse diarrhœa follows after the period of constipation. Usually, however, the movement is forced by a laxative, or by an enema.

A very grave symptom of chronic constipation is an intestinal colic, which is usually observed in spastic constipation. The patient is suddenly attacked by a severe pain in the abdomen. This pain may be so severe as to compel the patient to lie down, and may lead to unconsciousness. We find the abdomen distended. The patient feels some relief if flatus is passed. But the pain occurs again and is only ended if spontaneously, or by some means, a bowel movement is secured. These attacks are not quite harmless. Some patients offer the picture of a collapse and show even the symptoms of an ileus, with vomiting of fecal masses. Owing to the stagnation of fecal masses in the colon, dilatatiions of this part of the intestines may arise.

Diagnosis: It is easy to diagnose the presence of a constipation, that is to say, of a diminution of the frequency of bowel movements. It is, however, in many cases very difficult to determine the true nature of the constipation and to find out the primary cause. It is, therefore, in the first place indispensably necessary to examine the whole body of the patient to determine whether the patient is anæmic of chlorotic, neurasthenic or hysterical. In a local examination we should pay attention to all the abdominal organs, to the liver, the stomach, etc. The history of the patient must be considered carefully, in order to find out whether some historical data justify the suspicion of organic lesions of the intestines. Furthermore, we have to examine for piles. In women the sexual organs have to be examined, for we know how intimate the relation of the uterus and its adnexa is to the intestinal tract. Retroversions and adhesive processes in Douglas pouch are very often the primary cause of a constipation.

In the atonic form of constipation, the abdomen is usually distended. Pains are not very pronounced and mostly absent. The patient shows a psychical depression, headache and dizziness. The feces in an atonic constipation are harder than usual and mostly covered with a layer of mucus.

In spastic constipation the general condition of the patient may be

quite good. In this form, however, pain in the abdomen is much more pronounced. The above described colics with dizziness, and even loss of consciousness, are very characteristic of spastic constipation. The feces differ very much from that of atonic constipation. We find in spastic constipation a fragmentated bowel-movement: i. e., the patient's bowels move in small portions. We find either threads or pencil-like dry pieces, or small hard scybala. The bowel-movement is frequently very painful. On palpation we can feel, in spastic constipation, some contracted portions of the intestines. If the bowels have not moved for a long time, we can feel by palpation the individual scybala in the colon descendens.

Therapy: The main task of our therapeutical measures will be the treatment of the primary disease. In most cases the patients, consulting the physician have tried various kinds of laxatives. These have to be excluded, and we must try to bring the patient so far as to obtain bowel movements without the stimulus of laxatives or purgatives. We can influence the patient in three ways:

(a.) By suggestive factors.
(b.) By dietetic measures.
(c.) By general hygienic measures.

The suggestive treatment plays a great part in the therapy of chronic constipation. If we are able to influence our patients in this direction, our results will be satisfactory. Since peristaltic motion of the guts is not under the control of our will power, we are of course not able to stimulate peristalis directly by psychical stimuli, as suggestions. It is entirely erroneous to believe that by having the patient try a movement every day at the same time, the patient would get his regular bowel-movement. This fails in many cases and the patients become disappointed very soon. It is far more rational to distract the attention of the patient from this matter. Our aim must be to render bowel-movement an involuntary action, as in the normal. We must bring the patient to the point of not thinking of his disorder and of doing everything that is necessary to obtain bowel movements mechanically and unconsciously. All the measures applied in the therapy of constipation should have the character of procedures that are useful for a general treatment. The patient ought not to know that he is applying the measure in order to get a normal bowel-movement. On the contrary, the physician ought to tell the patient not to think of bowel movement at all, to assure him that a constipation of a few days would not do harm and that by applying some general measures the bowels would become normal spontaneously. We advise the patient, however, to go to the toilet every morning at the same time, after having taken a glass of cold water. Now although this rule has been given thousands and thousands of times, it has been carried out in the wrong way, and the patient did not get the right instruction. If a normal person

feels the desire of moving the bowels, he sits down, and the abdominal pressure begins the work. The only voluntary muscular action is the contraction of the abdominal muscles. This is, however, the ultimate action in the whole bowel movement. The feces pass through the whole intestinal tract, without our voluntary aid. First, after having arrived in the rectum, a contraction of the anal sphincter causes our desire for emptying the bowels, and we assist in this by contracting our abdominal muscles. In a normal person but a slight abdominal pressure is sufficient to bring about a complete movement. The feces pass through the anus almost involuntarily. From this we can deduct very easily how erroneous it is to advise a patient to try to have a bowel movement. This contracting his abdominal muscles, even if it were at a regular time every day, is practically useless. His peristalsis is poor and there are no feces in the rectum. The more the patient directs his attention to the bowels the slower peristalsis will be; since, as we have seen, intestinal peristalsis is not under the control of our mind. Moreover, all the impulses of peristalsis originate from the spinal chord and from involuntary centers, and, we know, the farther these centers are from the control of the brain, the better they work. Attention would inhibit peristalsis rather than stimulate it. To be brief, we advise the patient to make a habit of going daily to the toilet at the same time, sitting there for 15 to 20 minutes without thinking of bowel movement at all. In order to distract his mind from this matter, it would be recommendable to read a newspaper or something else. This is the very best means to eliminate any disturbing influence of the cerebrum By this habitual sitting on the toilet at regular times, we will by and by get a regular peristaltic movement.

The dietetic treatment is different according to the character of the constipation. In any case, however, the patient should avoid food-stuffs which are known to cause constipation, as heavy meat, smoked beef, red wine, strong tea, cocoa and chocolate.

In an atonic constipation the diet should consist of food-tuffs which increase peristalsis, such as fruits and vegetables, spinach, salad, cauliflower, peas, cabbage, rye bread, butter and honey. Buttermilk, firuit-juices, oranges, etc., are likewise recommended. Patients with a spastic constipation are not allowed to eat food-stuffs containing much cellulose. They prefer therefore a diet which gives a bulky stool without stimulating peristalsis too much. Butter and honey should be taken in great quantities.

Recent researchs have shown more and more that no sharp line can be drawn between spastic and chronic constipation, and most of our modern authors have given up the sharp distinction between both conditions, especially in the therapeutics. As a matter of fact, in many cases spestic and atonic conditions are co-existent at the same time. We have to treat every case individually and have to find out in every individual case what food agrees with the patient best. In any case the food must be so as to furnish a sufficient bulk for the feces; that is to say, it must be

rich in matters that are not absorbable, this being in the main cellulose. In a case with a pronounced atony of the intestines, the food must contain this cellulose in a coarse form. In spastic constipation, however, the cellulose must be finely distributed in the food. The salient point in treating constipation by dietetic measures is not so much the quality of the food as the manner of its preparation. Thus patients with atonic constipation will eat all the food-stuffs in a coarse preparation, as normal people do; whereas patients with spastic conditions will take the food mainly in a pulpy form. Now, unfortunately, even cellulose is partly reabsorbed in the intestines. Consequently, the remaining bulk is not big enough to form a good stool. For this it is necessary to have a large amount of non-absorbable matters in the intestines. This induced Schmidt to apply a substance not at all digestible and soluble in the intestinal tract, this substance being agar-agar, the well-known medium of bacterial cultures. Agar-agar is a hemi-cellulose, containing but 0.6 per cent. pure cellulose. If it is ingested in small particles it becomes very voluminous by absorbing large amounts of water, and thus it forms a big bulk. Agar-agar does not stimulate peristalsis, but it furnishes a bulky stool. In order to exert at the same time a stimulus, Schmidt applies a preparation of agar-agar containing a very small dose of cascara sagrada, 15-25 per cent. of the watery extract. This preparation is furnished by the chemical manufactory of Helfenberg in Germany, under the name of "regulin." The patients take daily about one teaspoonful up to two tablespoonfuls of regulin —about 1½-8 grams with marmelade or mashed potatoes. According to Schmidt, this remedy is successful in spastic as well as in atonic conditions. It is harmless and can be given to children just as well.

Among the general measures applied for constipation we mention at first exercise in the open air and hydrotherapeutic measures. As to exercise, we must again consider every case individually. It is not true that every person with a chronic constipation needs much exercise. On the contrary, there are patients for whom rest is far better. This is especially true in spastic conditions. For such cases some authors even prescribe rest in bed for some weeks. At any rate, too much exercise would do much harm in spastic patients. In atonic conditions a moderate amount of exercise, all sorts of sport, act favorably on bowel movement.

The hydrotherapeutic treatment consists in cold douches for atonic patients and hot applications for spastic constipation. In the latter a good effect is secured by rubber bags, filled with hot water, or so-called thermophors. The patient keeps it on the abdomen for several hours while in bed.

A further mechanical measure is massage. By this we wish to provoke and stimulate peristalsis. We understand that massage is contraindicated if there are spastic contractions of the bowels. We would cause here a still more intense spasm. In all cases of atonic constipation, however, massage, carried out in the right way and for a sufficiently long time, will prove a valuable means. The massage is best carried out at

night before going to sleep, daily at the same time for 10-15 minutes. We should never do it with force and cause pain. It is sufficient to give a simple effleurage along the colon and so forth. I see no reason why massage should not be performed in the early morning on a fasting stomach, as Einhorn recommends. Especially in weak persons it would be better to give the patient a rest after the massage in the evening. Automassage, as recommended by Rosenheim and others, is practically of no value, since most of the patients will not be painstaking enough as to carrying it out according to the prescription of the physician. Besides, the massage of a second person is of an invaluable suggestive power. Patients in massaging themselves would soon become discouraged, if the result does not become manifest after a short time. In addition to massage, however, we might recommend rational gymnastic exercise. All kinds of sport, if not too exerting, are very valuable auxiliaries to our therapy. It is of no great matter what kind of sport or exercise a patient has; we only emphasize that a regular daily exercise in a moderate dose will help to restore the poor peristalsis. The recommendation, however, of all sorts of gymnastic exercises in special institutes or special apparatus for these purposes is only a speculative business matter.

Vibratory massage with an electrical vibrator, the application of faradic or galvanic electricity may be tried, though this can not be regarded as an exclusive therapeutic agent.

All the above mentioned measures together may be able to secure regular bowel movements. In a great number of cases, however, we will be compelled to bring about movements by direct means, and here we can use enemas. Of course it has to be decided upon in every individual case how often an injection is required. We inject either pure warm water, or water with the addition of soap, soda or salt, and inject it under a not too high pressure. The quantity is ½-1 L. In some patients, by having these enemas made every day for 4-8 weeks, a complete recovery can be obtained. Some authors recommend to the patient to make the enema before going to bed and to retain the water till the next morning.

For spastic constipation the oil-enema, recommended by Kussmaul and Fleiner, is perhaps the most preferable application. ½ L. of warm olive oil are injected into the rectum by a soft rubber tube, while the patient is in bed and the patient is directed to stay in bed and to retain the oil until the next morning. This cure is not as successful as many authors claim. We can not regard it so optimistically. Besides this enema has the great disadvantage of soiling the bed clothes and the patients very soon refuse to continue the cure. On this account, Boas recommends to inject an emulsion of oil made by stirring two tablespoonfuls of olive oil, two tablespoonfuls of castor oil, ¼ pint of hot water and a point of a knife of soda, until we get a milky emulsion. This enema is indeed far cleaner and more agreeable. Still the results are likewise not always as satisfactory as many authors claim. In general, the treatment of consti-

pation is one of the most worrying and ungrateful tasks of the physicians. Almost every day the views on methods and remedies are changing. Things that have been praised enthusiastically to-day may be rejected and discredited to-morrow. So all the world believed that Metchnikoff had found the best means of all for the therapy of constipation, and all the world tried Yoghort milk, recommended by him. It was claimed that the lactic acid bacilli, contained abundantly in Yoghort, were able to combat the noxious proteolytic bacilli in the guts. Now in the first place, such things are only true in arguments, but not in nature; in the second place, some other authors have found that the destruction of the proteolytic bacilli in the gut may be harmful and even dangerous. Thus our enthusiasm is converted into disappointment.

The most scientific task of the physician will always be to study the physiology of his individual patient. For the physician there is no general physiology that is a collection of empirically selected laws, supposed to be a standard for the whole species. For him there is only the physiology of every individual patient. There are the rules of nature, which are different in each individual. This is what the physician has to observe and study, and the treatment consists simply in trying to accommodate these conditions under which the patient is living, and *vice versa*, to accommodate these conditions to the individually characterized functions of the patient. Since this is done so rarely, since most of the patients are treated schematically, according to some general statements, failures are experienced in so many cases.

The ulitmate refuge of securing a bowel movement, that is, the administration of a laxative or a purgative, is only allowed in cases in which it is necessary by all means to have the bowels moved. Otherwise we must avoid all such remedies.

The number of laxatives is very large. Rheum, senna, liquorice, castor oil, are the most common. A very rational prescription is given by Einhorn:

Aloes	1.0
Extr. belladonnæ	
Estr. nucis vomicon	0.3
Extr. et pulv. liquiritiæ	9

Pills No. XX. I pill 2 X daily.

Cascara sagrada is a very powerful laxative. We prescribe 15-25 drops of the fluid extract 2 X daily. Tamarinds and fig syrup are very popular laxatives. Of mineral waters the most effective is the bitter-water of Hunyadi-Janos.

205 Argyle Building.

THE USE OF THE BISMUTH VASELINE PASTE IN OSTEOMYELITIS. REPORT OF A CASE.

By T. R. Frazer, M. D., Commerce, Mo.

I was called February 20, 1908, to see a young man 18 years of age, who presented the following history and symptoms: Parents both living and healthy, except for rheumatism in both; this patient the youngest of eight children, all living and healthy. A few days before, he had been on a fox hunt during which he was exposed to cold, wet weather and fatigue.

I found him complaining of severe pain in the right ankle, the pain diffuse but most tenderness over the inner malleolus, some redness over the joint but little or no swelling; temp. 101; pulse 100; urine and saliva highly acid. I suspected osteomyelitis and enveloped the ankle in cotton saturated with alcohol, over which I applied a rubber bandage and administered salicylates and alkalies with anodynes.

On the next day, February 21, the symptoms were no better, pulse and temperature the same, but pain more severe; the urine contained albumin and granular casts; leucocyte count 10,000.

A hot sodium bicarbonate dressing was now applied and anodynes given hypodermically for the relief of the intense pain. For the next three days the symptoms remained the same, only the pain was more severe and required large doses of morphine hypodermically. A profuse epistaxis occurred about this time.

On February 25th I cut down on the bone and found pus exuding through a small opening, which I enlarged and evacuated a large quantity of pus, a smear of which showed streptococci. After the removal of the pus the constitutional symptoms improved though the pain and tenderness persisted, and on April 13 I operated under anesthesia and removed and curetted away a great quantity of dead bone, including the articular end of the tibia.

The cavity was packed with iodoform gauze daily though pain and tenderness persisted and the sinus continued to discharge pus and small particles of necrosed bone at intervals. Later iodoform emulsion was injected daily for several months, along with an occasional swabbing of the cavity with pure phenol and alcohol, though improvement, if any, was slight and about two drachms of pus continued to discharge daily. He was by this time able to get around well on crutches. In the meantime an incision was made about three inches above the first opening and a small quantity of pus was found which had forced its way through a small opening in the bone. A triangular portion of bone seemed to be separating from the shaft which was indicated by two deep grooves extending from each lateral margin of the cavity and joining at an angle

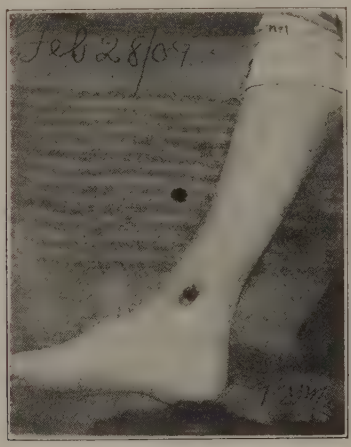
about four inches up the leg; this fragment of bone could be moved by slight pressure.

About this time my attention was called to the bismuth vaseline paste which I decided to try on this case and on February 28th, 1909, one year after the beginning of the trouble, I injected the paste of the following formula:

Bismuth subnitrate	30
White wax.	
Paraffin	āā 5
Petrolatum	60

The paste was injected in a molten state with an aspirating syringe through a long flexible nozzle. The hardening of the paste was accelerated by cold compresses over the part.

The patient was cautioned to report should any throbbing or symptoms of pus retention occur, but contrary to my expectations, he declared he felt less pain and soreness.



After ten days the paste was removed; it came away as a cast of the cavity; no discharge followed its removal. The paste was examined for pus cells but none were found in it, and the cavity presented a smooth, glistening appearance; another injection of paste was made which was allowed to remain until it was finally pushed out by the closing of the sinus.

Soon after this the patient threw away his crutch and began to put his weight on his ankle and four months after the first injection he accepted a position as clerk in a general store, which position he now holds. He dances and gets around as well as ever with just a slight limp in his walk. There is still a large depression over the malleolus.

Fourteen months have now elapsed since the first injection and as no return of the trouble has occurred I feel justified in reporting the success of the treatment in this case.

The accompanying cut shows the cavity at the time the last injection was made.

THE SELECTIVE MANAGEMENT OF CASES OF RETRODISPLACEMENT OF THE UTERUS.*

By H. S. Crossen, M. D., of St. Louis.

By the term "selective management" I mean the careful *selection* of the treatment with a view of securing that which is best adapted to the *exact conditions* present in the *individual* case. The time has long since passed when any particular operation or other form of treatment can be properly considered as THE only treatment for retrodisplacement as a whole. In each case the treatment to be chosen depends upon the particular conditons present in that case. A measure that in one case gives an excellent result, may in another case prove a complete failure, not from lack of skill in its execution, but from differing conditions to which it was not adapted. Medical literature is burdened with the descriptions of operations for retrodisplacement, many of which have been urged at one time or another as the cure-all for this affection. On the other hand, comparatively little attention has been given to the work of carefully *classifying* the cases according to the *particular conditions* present.

A distinct advance is made in the understanding of any disease when its various clinical forms and complications are clearly set forth. A still further advance is made when such classification finds its way into the general work of the profession. The accurate classification of cases of retrodisplacement of the uterus, with regard to the treatment to be employed, is a subject which I think should receive more general consideration and discussion than has hitherto been accorded it. For it is upon the accurate knowledge of these varied conditions and how to meet them, that effective treatment must rest.

The work of recent years has added to our knowledge a great deal of useful information concerning the pathological changes present in these cases and the effect of the various therapeutic measures employed. When this information is brought to bear upon the question of what is best to *do* in the case of each patient coming for treatment, then we are in a position to select that treatment which is most likely to restore the patient to health. There are many factors which have an important bearing on the selection of treatment. These factors, when given due weight, divide the cases into several *classes*—each class presenting certain *definite indications*, which point the way to effective treatment.

Starting with the usual division of the cases, according to the mobility of the uterus, into "freely movable," "partially movable" and "fixed," I I have found it useful in my work to further group the cases under sub-

*Read at the meeting of the Southwest Medical Association, San Antonio, Texas, 1909.

heads. As I am speaking from personal experience, and wish to make this useful in the experience of others, I have taken up the cases just as they are encountered in office work and at the operating table.

A patient comes for examination, and is found to have backward displacement of the uterus. An attempt is made to raise the corpus uteri by pressing upward with the examining fingers. If the body of the uterus can be easily raised, it is raised further until the fundus can be caught with the abdominal fingers and brought forward, thus bringing the uterus into proper position. If the corpus uteri can not be raised with the examining fingers, then a tenaculum forceps is slipped in beside the fingers and the cervix caught and brought forward. This brings the whole uterus toward the front of the pelvis and allows the fundus to swing clear of the sacral promontory, under which it is sometimes caught. Again, in bringing the uterus down, it is brought closer to the examining hand, which enables the fingers to pass further up its posterior surface and thus work to better advantage in attempting reposition. If the fundus uteri can now be raised, it is brought forward as before described. When the fundus uteri can be brought well forward, the uterus is said to be "freely movable," when it can be brought only part way forward it is classed as "partially movable," and when it can not be moved to any extent it is said to be "fixed."

UTERUS FREELY MOVABLE.

That class of cases in which the uterus is freely movable and can be brought well forward, presents many sub-classes, requiring different methods of treatment.

1. *Pessary.* Ordinarily when the uterus can be brought well forward without trouble, the adjustment of a suitable pessary is the preferable form of treatment.

2. *Knee-chest posture* in combination with pessary. If the uterus shows a tendency to go backward after replacement, add the knee-chest posture. It may be taken for one or two minutes, morning and evening. The best time usually is just after retiring at night and just before rising in the morning. This aids materially in keeping the uterus forward and also diminishes the dragging and pelvic distress, by taking off the downward pressure temporarily.

3. *Knee-chest posture alone.* There are certain cases in which it is preferable to use the knee-chest posture without the pessary.

(a) In cases where the pessary causes pain or so much irritation as to make the patient uncomfortable.

(b) In virgins, where local treatment or pessary is always to be avoided if possible. In some of these cases the knee-chest posture will bring the uterus fairly well forward and relieve the distress.

(c) In certain neurasthenic or hysterical individuals, it is advisable to avoid local treatment, so as to avoid fixing the patient's attention on the lesion of the genital tract. In such a case the knee-chest posture may

be given as part of a course of general exercise, and thus the desired effect may be secured without the patient suspecting any pelvic disease.

(d) In early pregnancy, where the pressure of the foreign body in the vagina might lead to miscarriage. In many of these cases the knee-chest posture is sufficient. When it does not prove satisfactory, then try the pessary, either alone or in conjunction with the knee-chest posture.

4. *No treatment.* There are certain cases at the extremes of the period of uterine activity, in which the displacement causes no disturbance and hence requires no treatment.

(a) A small virgin uterus is sometimes found displaced with no symptoms due to the displacement. These patients are usually examined for dysmenorrhœa and are often entirely relieved by dilatation and curettage without permanent correction of the retrodisplacement.

(b) In the case of small senile uterus, found in women long past the menopause, it seems to make little difference whether the atrophied

Fig. 1.—The puncturing tenaculum forceps. The instrument is strongly made and slender, and is designed to pass easily through the tissues of the abdominal wall, to penetrate the aponeurosis and peritoneum at any desired point, to grasp the round ligament firmly without bruising it, and to return through the wall, bringing the ligament along the new canal.

organ lies forward or backward. A careful investigation of these cases will usually show something else to account for the pelvic symptoms—frequently senile vaginitis and vulvitis (pruritis vulvæ).

5. *Perineorrhaphy.* If there is marked relaxation of the pelvic floor, permitting the cervix to sink downward and forward, that should be repaired. If the movable uterus stays forward well with a pessary, repair of the pelvic floor may be all the operative work necessary. But if any of the conditions mentioned in the next two paragraphs are present, additional operative treatment should be employed, and this can usually be carried out at the same time with the perineorrhaphy.

6. *Alexander's operation.* This shortening of the round ligaments without opening the peritoneal cavity, may be employed in cases where the uterus stays well forward with a pessary, but for some reason the pessary can not be worn or there is a desire to discard it. The field for

this operation is very limited. The uterus must be freely movable. It must stay forward easily with a pessary, thus excluding adhesions and other complications that would tend to draw it backward and make the operation a failure. There must be no appendiceal, tubal or ovarian condition requiring operative treatment or exploration. Most of the cases in which the pessary and knee-chest posture are not effective, require opening of the peritoneal cavity, because of the certainty or probability of intraperitoneal complications.

7. *Abdominal section.* The following cases of retrodisplacement with freely movable uterus, require abdominal section:

(a) Cases complicated by appendicitis. In these the appendix should be removed at the same time that the uterus is fastened forward.

(b) Cases complicated by ovarian or tubal disease requiring intraperitoneal investigation and treatment.

(c) Cases presenting uncertain conditions, in which the probability of some serious lesion (tumor, inflammation, adhesions) makes advisable intraperitoneal investigations along with the correction of the displacement.

(d) Cases in which the employment of pessary and knee-chest posture does not keep the uterus forward satisfactorily.

(e) Cases in which the pelvic distress persists in spite of the uterus being kept forward by non-operative measures. In such cases, before operation is resorted to, a most careful investigation should be made to determine certainly that the pelvic distress is really due to a pathological condition of the uterus or adnexa, and not to some general disease (nervous, nutritive, circulatory) or to simple local neuralgia.

UTERUS PARTIALLY MOVABLE.

This class includes the majority of cases of retrodisplacement. Following the displacement or coincident with it, there has been some inflammation, leaving as sequelæ adhesions and infiltration, which limit the mobility of the uterus. Here, also, are sub-classes requiring different methods of treatment.

1. *Bimanual stretching of adhesions or infiltrated tissues.* In these cases, the object of the bimanual manipulation is to raise the corpus uteri as far as it will go and then stretch the restraining tissue, so it can be raised still further. This *stretching* should be done *gently,* so as not to tear tissue or cause severe pain. Each movement should be made with the definite object of stretching some resisting tissue, and practically all the movements are made in the direction of reposition of the uterus, i. e., either raising the fundus and bringing it forward or pushing the cervix backward. In many cases of long standing backward displacement, the cervix is held forward by shortening and infiltration of the tissues in front of it. This shortening must be overcome by carrying the cervix far back in the pelvis and thus lengthening the shortened tissues.

2. *Knee-chest posture and pessaries.* In cases where the uterus can not be brought entirely forward, the patient should take the knee-chest posture twice daily, in order to assist in holding what is gained by the treatments. If desired, a vaginal tamponade may be used after each treatment. When the fundus uteri has been raised far enough to permit the cervix being pushed well back in the pelvis, it is sometimes advantageous to introduce a suitable pessary of the Hodge or Smith or Thomas

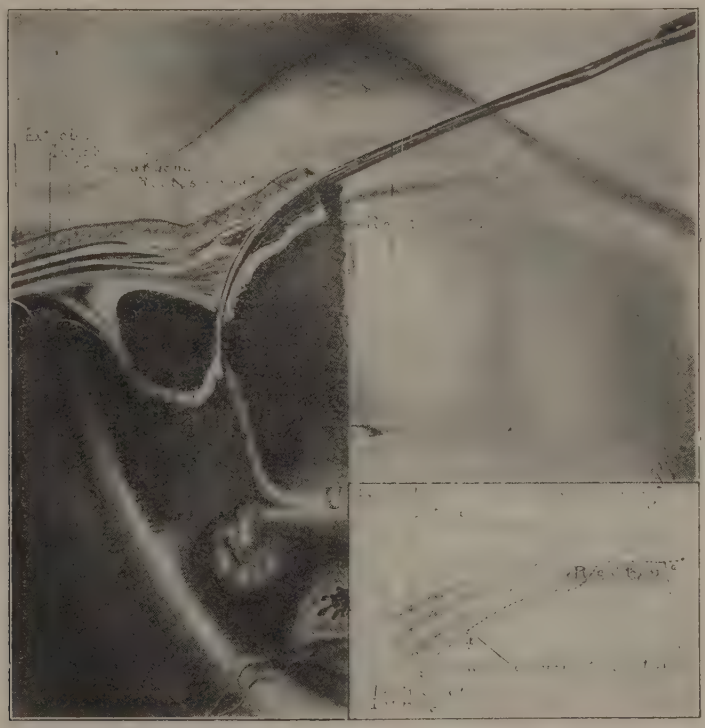


Fig. 2.—The puncturing tenaculum forceps introduced through the wall, as described, and grasping the round ligament. In introducing the forceps through the wall the point is carried along the course indicated by the dotted line *a* to *b* in the small sketch in the corner. Notice that the puncture through the strong aponeurotic wall is made near the outer margin of the rectus muscle, while the puncture through the peritoneum is made at *b*, which is near the internal inguinal ring. The distance from *b* to the internal ring is so short (about one inch) that no puckering suture is necessary. This point is further explained in Figure 3.

type, even though the fundus has not been brought entirely forward. The pessary thus placed holds the cervix well back in the pelvis, and thus assists in keeping the fundus raised and in bringing it forward in the knee-chest posture. When the uterus can not be replaced, considerable temporary relief from the dragging may be given in some cases by using the inflated ring pessary. This form has no particular action in main-

taining the uterus in a forward position, but simply lifts up the whole uterus a short distance, and thus relieves some of the dragging. The effective use of pessaries, knee-chest posture and other non-operative measures, I have taken up in detail in a recent article.*

3. *Abdominal section.* The fact that the mobility of the uterus is limited, is evidence in itself of some pathological condition in the pelvis, in addition to the uterine displacement. A large proportion of these cases require intraperitoneal operation, either at once or after a trial of palliative measures. Before subjecting the patient to operation, care should be taken to determine that the limitation of mobility is not due simply to the sequelæ of an old cellulitis about the uterus. This infiltration of connective tissue, whether it fixes the uterus little or much, can not be corrected satisfactorily by intraperitoneal operation (abdominal section) and should not be taken as an indication for such operation.

UTERUS FIXED.

Even in the cases of firmly fixed uterus, there are sub-classes requiring different methods of treatment.

1. *No Treatment.* Occasionally a displaced adherent uterus gives rise to no symptoms. In the child-bearing period, when the uterus is large, heavy and functionating, its displacement practically always causes troublesome symptoms as long as the uterus is at all movable. On the other hand, if the uterus is firmly fixed, so firmly as to prevent dragging, it may give no trouble. An occasional instance of this kind has come under my observation, and such cases are very instructive, for they indicate that the symptoms in displacement are due not to the abnormal location of the corpus uteri but to the dragging on stretched and tender structures. This same fact is of much importance also in operative treatment and indicates the wisdom of choosing those forms of operation which not only bring the uterus forward but at the same time elevate it, and thus overcome the dragging and partial prolapse which is usually present in these cases.

2. *Stretching and knee-chest posture.* In cases not suitable for operation the persistent employment of these measures may secure considerable relief. Bimanual stretching of the tissues, with the other non-operative measures, are indicated especially in those cases of fixation due to sequelæ of *pelvic cellulitis* without tubal involvement. These are the cases in which most effect can be secured from the stretching of the involved tissues. They are the cases, also, which can not be satisfactorily handled by intraperitoneal operation, for the lesion is not in the peritoneal cavity but in the connective tissue. Again, the patients, with intra-peritoneal adhesions, who are not in physical condition for operation, or who refuse operation, may in some cases be given considerable relief by these

[*Practical Points in the Office Treatment of Retrodisplacement of the Uterus, by H. S. Crossen, M. D., *Interstate Medical Journal*, January, 1910.]

measures faithfully employed. If there is much inflammation, treatment for that is of course also given.

3. *Abdominal section.* In most cases, the fixation is due to adnexal inflammation with intraperitoneal exudate and adhesions. If of long standing, operation is required for its relief. If the inflammation is of recent origin, palliative measures are to be given a trial, with operation later if necessary. In some cases the fixation of the uterus is due to a tumor requiring removal.

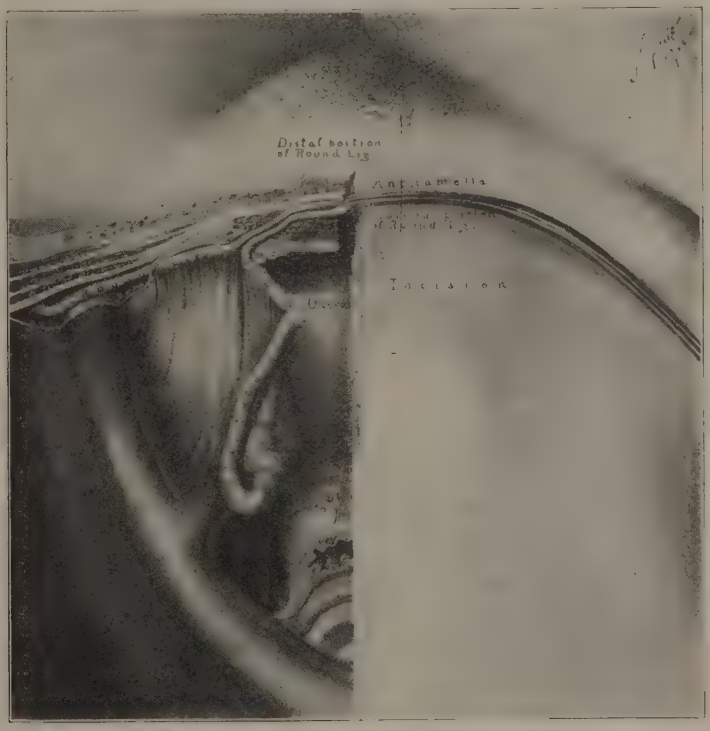


Fig. 3.—The left round ligament drawn into place. Notice that the direction of pull on the uterus is changed from lateral to anterior. At the same time there is no large opening between the distal portion of the round ligament and the anterior abdominal wall requiring a suture, as in the regular Gilliam-Ferguson operation. The distance from the peritoneal exit of the new ligament to the lateral edge of the peritoneal cavity at this level is so small (represented in the corner sketch in Figure 2 by the distance from *b* to the internal inguinal ring) that it is closed by moderate traction on the distal portion of the round ligament loop appearing in the wound. If it is desired to bring the uterus farther forward the proximal portion of the ligament is pulled on. If the peritoneum becomes tense before there is sufficient tension on the round ligament to bring the uterus well forward, the peritoneum over the ligament loop may be incised and the ligament itself grasped and drawn out as desired.

CHOICE OF INTRAPERITONEAL TREATMENT.

When it has been necessary to open the abdomen, and the adnexal lesions, if any, have been taken care of, then comes the question "What

method should be employed to hold the uterus in anterior position?" The answer to this question varies with the conditions present in the pelvis. It is an important question and one which confronts the gynecologist frequently in his daily work. In the first place, after the abdomen has been opened and the adnexal trouble corrected, the selection of treatment for the displacement hinges largely on the possibility of future pregnancy. So the cases are considered in two classes—the first class including those in which future pregnancy is possible and the second class including those in which pregnancy is not possible.

A. FUTURE PREGNANCY POSSIBLE. When future pregnancy is possible, no method of fastening forward the uterus is permissible which could interfere seriously with pregnancy or parturition. This excludes at once ventro-fixation and ventro-suspension.

Ventro-suspension has been employed many times in the child-bearing period and often with good results. But a large number of serious results of various kinds have been reported from subsequent pregnancies, and, as long ago as 1905, Lynch collected 21 cases in which Cæsarian section was necessary because of the effect of this operation. It is the *uncertainty* as to the amount of suspension or fixation which will result, that makes the operation dangerous in the child-bearing period. The object of the operation is to form a short suspension band, strong enough to hold the uterus forward and upward but that will not interfere with the development of the uterus in pregnancy. But reported cases show that when the fundus uteri is once sutured to the abdominal wall there is no certainty as to just how much suspension or fixation will take place. From the ideal result the uncertainty extends in both directions, i. e. there may result a firm fixation to the abdominal wall causing a disastrous result in a subsequent pregnancy, or, on the other hand, the suspension band may become so slight and attenuated that it fails to hold the fundus forward, and there is recurrence of the old displacement. Again, about such long bands there is danger of the intestine becoming entangled, forming acute intestinal obstruction. These bad results have ocurred often enough to make them valid objections, and accumulated experience has demonstrated upnquestionably that this operation should not be employed when future pregnancy is to be reckoned with.

As to what method *should* be employed when pregnancy is possible, that depends upon the particular conditions present in the pelvis as determined by examination after the abdomen is open. I have found it advisable in my work to divide these cases into four classes, as follows:

1. Cases in which the round ligaments and adjacent tissues are freely movable.

2. Cases in which the round ligaments and adjacent tissues are fixed by inflammatory infiltration or other abnormal condition.

3. Cases in which the cervix lies so far forward that the axis of the uterus still lacks the normal anterior direction even when the fundus is brought into the front part of the pelvis.

4. Cases in which there is so much inflammatory infiltration and contraction of the posterior part of the broad ligaments, that the uterus can not be brought entirely forward, without danger of serious injury to important structures.

1. *When the round ligaments are freely movable.* In these cases the broad ligaments, or at least the anterior portions, with the round ligaments, are soft and yielding and can be stretched as desired. The uterus

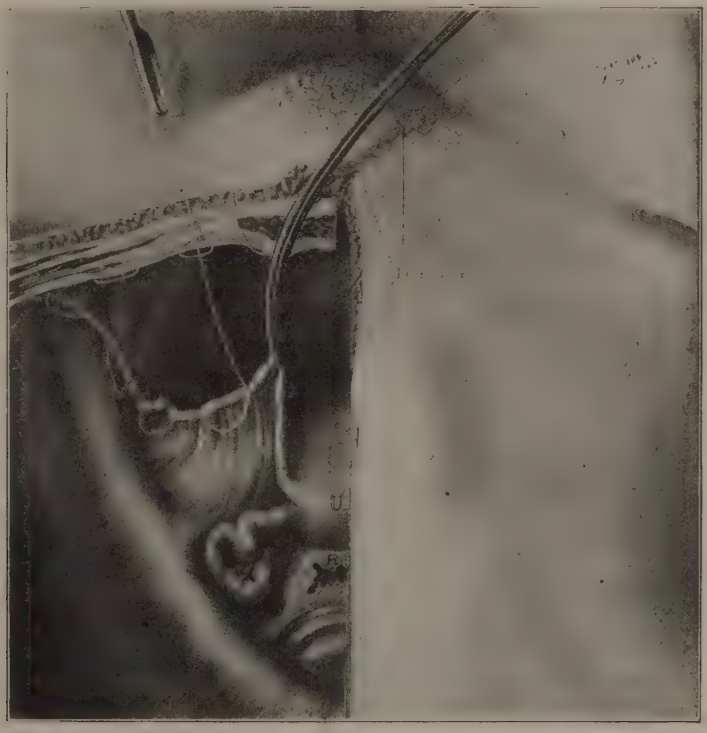


Fig. 4.—The use of the puncturing tenaculum forceps in the regular Gilliam-Ferguson operation. The puncture is made directly through the upper sheath, the rectus muscle, the lower sheath and the peritoneum, and the ligament grasped and brought out—the puckering suture having been previously passed. After the ligament is brought out as desired, the puckering suture is tied, thus closing the opening at the side between the distal portion of the round ligament and the anterior abdominal wall.

is freely movable after the adhesions have been broken up, and if it is necessary to extirpate a tube, the work has been carried out in such a way as not to interfere with the pliability of the tissues in the neighborhood of the round ligaments.

In such a case the round ligaments should be utilized for holding the uterus forward. These ligaments are definite structures, already formed of tissues intended for support, and can be depended upon as to approxi-

mate size and sustaining power in after years. Hence they are preferable to peritoneal adhesions, the size and strength of which are necessarily problematical. Furthermore, the round ligaments are embryologically part of the uterus and, with the uterus, undergo hypertrophy and softening during pregnancy, and tend to return to their former condition by involution during the puerperium.

In utilizing the round ligaments for holding forward the uterus, there are two principles which should be kept in mind, as follows:

a. *The strong part of the ligament should be utilized for holding the uterus.* The strong part of the ligament is that portion near the uterus. The outer portion of the ligament is the weak part, and in these cases of displacement it is further thinned out and weakened. This fact was clearly demonstrated in the days when the Alexander operation was more frequently used. The distal portion of the ligament was often so attenuated as to be hardly recognizable, and in all cases we had to handle it very carefully and pull very gently, until the thick, strong, proximal portion next to the uterus, came into view.

Practically all the intra-abdominal *folding* operations, utilize only the weak part of the ligament. Of course, where there is not much backward pull it does very well, but where there is a decided tendency backward, a return of the displacement is likely to take place after some months or some years. This occurred so often with the old folding operations that other methods were devised with the idea of overcoming it. This is one reason for the multiplicity of operations. The more recent intro-abdominal folding operations depend largely on the peritoneum and peritoneal adhesions, which I maintain is not advisable where future pregnancy is to be reckoned with, because of the possibility of firm fixation and consequent interference with pregnancy, and also because of the improbability of the overstretched retaining tissue becoming sufficiently shortened again by involution during the puerperium.

b. *The direction of pull of the ligament should be changed from a lateral to a forward direction,* in order to effectually meet the strong backward tendency in these troublesome cases in which the abdomen must be opened. The normal exit of the round ligament is placed too far laterally to hold the uterus well forward when there is much tendency to go back after replacement. This has been noted repeatedly by operators, and, in fact, it has long been established, that the function of the round ligaments is to exert forward traction on the uterus, *not* in its normal position, but *only* when it is in marked backward displacement.

This element of failure has caused disappointment in many cases, following the Alexander operation and its modifications. I am not condemning the Alexander operation. It is an excellent operation in certain well selected cases. I have used it with good results and have watched it through pregnancy and labor and afterward with the utmost satisfaction. But I have found that it is not applicable in certain cases of apparently freely movable retrodisplacement; namely, in those cases in which there

is a persistent backward pull, as evidenced by the tendency of the uterus to go backward as soon as the replacing fingers were removed. In such cases it is likely to result in partial failure, the uterus being found in moderate backward displacement after a time. Likewise, a shortening of the ligaments after abdominal section *by drawing them through the internal inguinal rings* may result in the same partial failure if there is much tendency of the uterus to go backward.

The two principles (utilization of the strong portion of the ligaments and change of pull from a lateral to a forward direction) are fulfilled by the Gilliam operation and its modifications. The strong portion of each round ligament is brought out through the musculo-aponeurotic wall of the abdomen at a point nearer the median line, thus the pull of the ligament is changed from a lateral to a forward direction. The sustaining part of the ligament has been transplanted to a new place in the abdominal wall, hence the term "transplantation of the round ligaments" by which this form of operation is frequently designated. To effect the transplantation, Gilliam passed a temporary ligature about the ligament 1½ inches from the uterus, then caught the ligature in a forceps passed through the rectus muscle, and drew the ligament out through the muscle. Ferguson added a puckering suture at each side to close the space between the distal portion of the ligament (not drawn into the new exit) and the abdominal wall, there being danger of an intestinal coil slipping through this space and being caught.

Preferable method. The most satisfactory method that I have found for transplantation of the round ligaments, is a modification of the Gilliam operation which I devised some three years ago and described a year later. The article appeared in the JOURNAL of the American Medical Association, and I have received letters from many sections of the country in regard to it. From that article* the following description and illustrations are taken, the technique being given in four steps:

Step 1. The special work for which the abdominal cavity was opened having been completed, the left round ligament is grasped with an ordinary tenaculum-forceps about 1½ inches from the uterus. The right ligament is caught in a similar manner with another forceps, and then any retractors that are in the way are removed from the abdominal wall. The grasping of the ligaments of each side with the tenaculum-forceps, facilitates the subsequent manipulation of the ligaments, after the removal of the retractors which expose the pelvic cavity.

Step 2. The point of the puncturing tenaculum forceps (Fig. 1) is entered in the left side of the wound, just beneath the upper sheath of the rectus muscle and about one inch above the pubic bone. It is passed outward just beneath the sheath for an inch and then the point is directed

*The Preferable Method of Anterior Fixation of the Uterus When the Abdomen is Open. The President's Address, St. Louis Obstetrical and Gynecological Society. H. S. Crossen, M. D., Journal American Med. Assoc., Vol. XLVIII., p. 1488.

downward and made to puncture the rectus muscle and posterior sheath, but not the peritoneum. Guided by the fingers in the abdomen, it is then passed outward between the peritoneum and the aponeurosis to a point about one inch from the internal inguinal ring, where it is made to penetrate the peritoneum. The handle of the instrument is then raised so as to direct the point toward the round ligament and it is made to grasp the ligament about 1½ inches from the uterus (Fig. 2).

In the class of cases under consideration, the ligament and peritoneum are usually so stretched and lax that they are easily drawn into the new canal as a small cord. If the ligament is unusually thick, or if the peritoneum is so thickened that is probably will not pass easily into the forceps canal, a window may be snipped in the peritoneum in front of the ligament and the ligament alone grasped and brought into the canal.

Step 3. The forceps is then withdrawn, bringing the ligament with it into the forceps track and out at the abdominal wound (Fig. 3). The loop of ligament brought out is now caught and held by an ordinary tenaculum forceps, while the right ligament is brought out in a similar manner. After the ligaments are brought into position, the tension is adjusted. It may be necessary to bring out a little more of the proximal portion or a little more of the distal portion, the former to bring the fundus well forward and the latter to close effectively any space that may exist between the distal portion and the parietal peritoneum. By paying attention to this latter point the peritoneal puncture may be made a considerable distance from the internal inguinal ring without leaving any opening through which an intestinal coil might slip. The parietal peritoneum, being freely movable on account of the loose sub-peritoneal tissue, is drawn inward and puckered when the proximal portion of the ligament is drawn on to bring the uterus forward. This brings the peritoneal exit almost opposite the aponeurotic exit of the new ligament, near the outer margin of the rectus muscle. The direction of the new ligament, therefore, is forward.

Step 4. The ligaments are then fastened in their new position. If long enough, the loops are overlapped in the median line and fastened to each other and to the upper sheath of the rectus. If not long enough to reach to the median line they are fastened securely in the forceps track by catgut sutures passed through the upper sheath and the ligaments beneath. The abdominal incision is then closed in the usual way.

By the above method, the ligaments may be transplanted into the abdominal wall very quickly, giving a strong reliable forward and upward traction on the uterus and adnexa, without any free bands or dangerous adventitious openings. The advantages of this technique over that usually employed, is that it *simplifies* and *expediates* the work, by doing away with the temporary ligation of the ligament and also with the lateral puckering suture.

The puncturing tenaculum-forceps here mentioned, I designed in 1905, and have been using with much satisfaction since. It is strong and

slender, and is designed to pass easily through the tissues of the abdominal wall, to penetrate the aponeurosis and peritoneum at any desired point, to grasp the round ligament firmly without bruising it, and to return through the wall, bringing the ligament along the new canal.

2. *When the round ligaments are fixed.* In this class come those cases of retrodisplacement in which there is fixation of the round ligament and adjacent tissues, so that it is not practicable to draw into the wall either the round ligament and adjacent peritoneum or even the round ligament alone.

Such fixation may be due to inflammatory infiltration, associated with salpingitis, peritonitis or cellulitis, or it may be due to the way the ligatures are placed in removing a damaged tube or ovary. Unless particular care is exercised in excising the damaged adnexa, the tissues are likely to be fixed by the ligatures—in fact, when mass ligatures are passed and tied before the uterus is brought well forward, the organ may be so fixed by the ligatures that it can not afterward be brought forward satisfactorily. To prevent this it is well to avoid mass ligatures, and to hold the uterus well forward while placing any ligatures that may interfere with its mobility.

In these cases, the round ligaments are so fixed by inflammatory infiltration or other abnormal condition that the transplantation operation above described can not be satisfactorily carried out. In these cases, the regular Gilliam-Ferguson operation is employed. In the execution of this operation, the puncturing tenaculum-forceps, previously mentioned, is very convenient for puncturing the rectus muscle and catching the ligament and bringing it out through the muscle. The method of its use in this connection is shown in Feg. 4.

3. *When the cervix is too far forward.* In the cases of this class, the cervix comes so far forward that the uterus does not have the proper forward inclination even when the fundus is brought well into the front part of the pelvis. The raising of the fundus and the adnexa relieves the symptoms for a time, but the position of the uterus with the body still directed straight up or slightly backward is such that the intestines run in front of it and sooner or later it is forced backward again into troublesome retrodisplacement.

The cause of the cervix being so far forward, is the lax condition of the supporting structures, particularly the sacro-uterine ligaments. Occasionally, the cervix is held forward by shortening of the tissues anterior to the cervix by inflammation or other cause. When this is the case, the contraction should be overcome by stretching or an incision of the contracted tissues before an attempt is made to fasten the uterus forward. Generally, however, the tissues are lax all around the cervix.

In these cases, in addition to fastening the fundus forward, while the abdomen is open the cervix should be drawn backward and raised by shortening the sacrouterine ligaments. With good exposure of the pelvic cavity and the intestines packed out of the way, there is not much difficulty

in accurately placing a suture which, when tied, will effectually pucker the ligament and lift the cervix upward and backward. The suture should be passed rather superficially so as to avoid injuring vessels and other structures near the pelvic wall, and the surfaces to be brought together should be roughened so that agglutination will take place and adhesions follow. Both sutures could be placed before either are tied, for when the cervix is drawn back close to the rectum it is difficult to place a suture satisfactorily in this region. In most of these cases of relaxed sacrouterine ligaments, there has been marked laceration of the pelvic floor, the repair of which is indicated as a part of the operative work.

4. *When there is contraction of the posterior part of the broad ligament.* There are certain cases of retrodisplacement with extensive chronic inflammation in which, after removing a disorganized tube and breaking up the adhesions posterior to the uterus and broad ligaments, there is still so much inflammatory infiltration limiting the mobility of the uterus that it can not be brought well forward, without danger of injury to important structures or such resulting tension as will cause distress. The question is: What is the best procedure in such a case? Shall we persist in trying to loosen the uterus so that it will come far forward, at a risk of injury to the large vessels along the pelvic brim which are firmly imbedded in the infiltrated tissue, or shall we fasten the fundus forward to the abdominal wall under strong tension, or shall we leave it in its perpendicular or slightly backward position?

I think that, as a rule, the last mentioned plan is the best in these exceptional cases. The principal symptoms are due to the inflammatory mass, which has been removed. Usually the uterus can easily be brought forward to a position midway between the normal position and decided retrodisplacement, and this position, when maintained, practically never in itself causes troublesome symptoms.

Whether the uterus will stay in this elevated position or return to its former one, depends on whether the tissues are pliable and the uterus movable. If they are, the uterus will not stay in this midposition; but when the tissues are fixed by infiltration, this, with the scar tissue which results from the removal of the diseased tube or tubes, so fixes the uterus that it is likely to be held in that position indefinitely.

To favor the maintenance of the uterus in that position, care should be taken, before closing the abdomen, to see that the intestines extend into the posterior part of the pelvis and that the omentum comes down over them and is, when long enough, tucked in back of the uterus. The intestines and omentum back of the uterus assist in holding the latter forward during the healing process, and also tend to prevent adhesions which extend directly from the uterus to the posterior pelvic wall, the contraction of which would draw the uterus farther back.

In certain of these cases, some of the structures alongside the uterus, on one or both sides, may be fastened forward, thus helping to maintain the uterus part way forward both during the healing process and after-

ward. In one especially troublesome case of this kind, I was able to secure a satisfactory result by suturing the upper anterior margin of the broad ligament to the anterior abdominal wall for a considerable distance inward from the pelvic margin on each side.

B. PREGNANCY NOT POSSIBLE. Future pregnancy need not be taken into consideration in the following three classes of cases:

1. Cases in which both tubes have been completely removed.
2. Cases in which both ovaries have been completely removed.
3. Cases in which the patient is past the menopause.

Pregnancy has been reported under some of the conditions mentioned in these three classes, but such cases are so rare as to be mere curiosities, and need not be considered in planning the treatment. Ventro-fixation of the uterus or hysterectomy is usually employed under these circumstances.

a. *Ventro-fixation.* As no provision need be made for future pregnancy, the uterus may be fastened forward either by ventro-fixation or by transplantation of the round ligaments. As the mobility of the round ligaments has, in most of these cases, been markedly interfered with by the extensive removal of adnexa and broad ligament tissue, ventro-fixation remains the operation of choice in this small class of cases. The fixation of the fundus uteri to the anterior abdominal wall may be secured by passing the sutures about as has been done for ventor-suspension *except more deeply*, and then scarifying the peritoneal surfaces so as to give a broad area of adhesion. Another method is to pull aside the peritoneum some and bring the fundus uteri into direct contact with the connective tissue of the abdominal wall in the median line. This gives a firmer union. By either method, the object is to secure *fixation,* (not suspension) of the uterus to the abdominal wall—a fixation that will keep the fundus uteri well forward under all circumstances.

b. *Hysterectomy.* In the classes of cases under consideration, if the displaced uterus is chronically inflamed or otherwise diseased so that it is likely to give trouble even though fastened forward, it had best be removed. As a rule, this is preferably accomplished by supravaginal hysterectomy, but if the cervix is much affected, total hysterectomy is the operation of choice.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

THE HANNIBAL SESSION.

The annual meeting of the State Association at Hannibal on May 3rd to 5th, was one of the most successful and perfectly planned meetings in the history of the organization. Almost 300 members attended, and on every hand none but expressions of satisfaction and pleasure over the perfection of the arrangements and the attractiveness of the program were heard. The physicans of Hannibal were exceedngly hospitable and very industrious in their efforts to have every member comfortably located and assured of a pleasant visit.

The House of Delegates finished its business by noon on the morning of the first day, owing to the plan of printing the reports of the committees in advance; and it was possible, therefore, to read papers in the afternoon of this day in the different sections, which all members were at liberty to attend and take part in the discussions. On Wednesday morning a general session was held, when papers of a general character were read and discussed; again in the evening of the same day another session of the general society was held and additional papers having an interest for all members were read and discussed. On Tuesday evening the president, Dr. Tinsley Brown, delivered his address. This was followed by a scholarly paper by the invited guest of the Associaton, Past

Assistant Surgeon B. S. Warren of the U. S. P. H. & M. H. Service. The oration on Medicine by Dr. N. P. Wood of Independence, and that on Surgery by Dr. Francis Reder of St. Louis, followed. Addresses of welcome were delivered by Dr. W. H. Hoy of Hannibal, and Mr. S. J. Roy, secretary of the Commercial Club. This meeting took place in the Opera House when it was found that the hall in the Knights of Father Mathew building would not be adequate to seat all the visitors.

The registration in the Surgical and Medical sections was very large, but the section on Eye, Ear, Nose and Throat was a disappointment; only two papers were read in the latter section and the attendance was not at all what had been expected. With this exception the program was as near ideal as it is possible to prepare. The failure of the Eye Section in spite of the diligence of the officers of that section, who prepared a program of unusual interest and high quality, would seem to be that there is little demand for any further sectional divison of the scientific program.

The reports of all the committees showed an encouraging growth of interest by the general membership in the work of the organization, the report of the Council on Medical Education being especially interesting and enlightening. The committee on Medical Defense reported that a number of suits for malpractice had been defended, a number of them successfully, and all the others continued. Only $100 was expended by the committee, so that the fund still has $900 to its credit. An additional $1000 was set aside for the use of the defense committee, bringing the total amount of this fund at present to $1900.

The pleasure of the visit to Hannibal was not confined to the enjoyment of the work of the Associaton, for everybody took occasion to wander about the town and visit the places made famous by our great and lately departed humorist and philosopher, Mark Twain. His home still stands and the "old town" seemed to breathe the mischievous spirit of Tom Sawyer and Huck Finn as we drove through the narrow streets. Certainly every member who attended the Hannibal meeting will long remember its beautiful surroundings and the successful meeting held there.

ST. LOUIS SESSION OF THE AMERICAN ASSOCIATION.

The coming meeting of the American Medical Association promises to equal if not exceed in attendance any previous session. The hotel reservations are very large, almost all the principal hotels being filled to their capacity, and yet the reservations continue to pour in. The hotels committee is taking good care of everybody and all guests will be nicely located.

The St. Louis Medical Society is arranging for the entertainment of the members in a manner that will, it is hoped, leave nothing but pleasant memories of the session. The interest in the work of this great body has been growing rapidly in our state ever since the reorganization, and the high objects for which it stands commend it to all right-thinking physicians. The knowledge gained at the annual meetings of the American Medical Association is invaluable to progressive physicians.

One of the attractive features of the meeting will be the post-graduate instruction that will be given by the medical departments of the St. Louis University and the Washington University during the week before and the week following the session. Announcement of these clinics has already been made and a large attendance is expected; there is no charge for admission to the clinics.

The general headquarters of the committee of arrangements are in room 609 Metropolitan building, Grand avenue and Olive street. All visiting physicians are cordially invited to make use of this office in every way that will be helpful to them.

The opening exercises of the meeting will take place at he Odeon Theatre, Grand and Finney avenues, at ten o'clock on June 7th. At two o'clock in the afternoon the sections will begin their meetings and hold session morning and afternoon thereafter at the following places:

General Session: Odeon Theatre, Grand and Finney avenues.

House of Delegates: St. Louis Medical Society, 3523 Pine street.

Scientific and Commercial Exhibits, Postoffice, Registration Office: Coliseum, Washington and Jefferson.

President's Reception: First Regiment Armory, Grand and Manchester avenues.

Medicine: Third Baptist Church, Grand and Washington avenues.

Surgery: Odeon Theatre, Grand and Finney avenues.

Obstetrics and Diseases of Women: Y. M. C. A. Building—Association Hall, Grand and Franklin avenues.

Laryngology and Otology: Sodality Hall, Grand avenue, between Pine and Laclede.

Ophthalmology: Aschenbroedel Hall, 3535 Pine street.

Diseases of Children: Grand Avenue Presbyterian Church, Sunday School Room, Grand and Washington avenues.

Pharmacology and Therapeutics: Delmar Avenue Congregational Church, Delmar, west of Grand avenue.

Stomatology: Y. M. C. A. Building—Small Hall, Grand and Franklin avenues.

Nervous and Mental Diseases: St. Louis University Library, Grand avenue, head of East Pine.

DERMATOLOGY: Odeon Bldg.—Recital Hall, Grand and Finney avenues.
PREVENTIVE MEDICINE AND PUBLIC HEALTH: Knights of Columbus Bldg., 3549 Olive street.
PATHOLOGY AND PHYSIOLOGY: Y. M. C. A. Building—Lecture Hall, Grand and Franklin.

FOR A DEPARTMENT OF HEALTH.

The bill of Senator Robt. L. Owen of Oklahoma, establishing a Department of Public Health, should commend itself to every physician in the United States, and especially to the physicians of this State. Every member of the State Medical Association should make an effort to bring influence upon the Senators and Congressmen from this State, favorable to the passage of the bill; and especially should the members of the Auxiliary Committee on Public Policy and Legislation interest themselves actively to this end. It is the duty of each auxiliary member to engage the attention of influential persons in his community and urge them to lend their influence in securing the establishment of a Department of Health at Washington.

It would greatly facilitate the accomplishment of this object if our members would endeavor to interest local civic bodies, commercial clubs, and all organizations having for their object the improvement of the material, moral and physical welfare of the people.

After having written the Senators and Congressmen, the auxiliary committeemen are urged to inform the Secretary of the Bureau of Legislation, American Medical Association, 535 Dearborn avenue, Chicago, the steps he has taken, and forward copies of any letters written and resolutions adopted, and all other information that might be helpful in the effort to create a Department of Public Health.

For the information of the members we print the bill in full:

A BILL

Establishing a Department of Public Health, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established a Department of Public Health under the supervision of the Secretary of Public Health, who shall be appointed by the President a Cabinet officer, by and with the consent of the Senate, at a salary of twelve thousand dollars per annum, with like tenure of office of other Cabinet officers.

SEC. 2. That all departments and bureaus belonging to any department, excepting the Department of War and the Department of the Navy, affecting the medical, surgical, biological, or sanitary service, or any questions relative thereto, shall be combined in one department, to be known as the Department of Public Health, particularly including therein the Bureau fo Public Health and Marine-Hospital Service, the medical officers of the Revenue-Cutter Service,

the medical referee, the assistant medical referee, the surgeons and examiners of the Pension Office; all physicians and medical officers in the service of the Indian Bureau, or the Department of the Interior, at old soldiers' homes, at the Government Hospital for the Insane, and the Freedman's Hospital and other hospitals of the United States; the Bureau of Entomology, the Bureau of Chemistry and of Animal Industry of the Department of Agriculture; the hospitals of the Immigration Bureau of the Department of Commerce and Labor; the emergency relief in the Government Printing Office, and every other agency of the United States for the protection of the health of the people of the United States, or of animal life, be, and are hereby transferred to the Department of Public Health, which shall hereafter exercise exclusive jurisdiction and supervision thereof.

SEC. 3. That the official records, papers, furniture, fixtures, and all matters, all property of any kind or description pertaining to the business of any such bureau, office, department, or branch of the public service is hereby transferred to the Department of Public Health.

SEC 4. That the Secretary of Public Health shall have supervision over the Department of Public Health, and shall be assisted by an Assistant Secretary of Public Health, to be appointed by the President, by and with the advice and consent of the Senate, at a salary of six thousand dollars a year, with such duties as shall be prescribed by the Secretary not inconsistent with law.

SEC. 5. That the Secretary of Public Health shall be authorized to appoint such subordinates as may be found necessary. There shall be a chief clerk appointed at a salary not to exceed three thousand dollars a year, and such other clerks as may from time to time be authorized by Congress.

SEC. 6. That the officers and employees of the public service transferred to the Department of Public Health shall, subject to further action by Congress, receive the salaries and allowances now provided by law.

SEC. 7. That it shall be the duty and province of such Department of Public Health to supervise all matters within the control of the Federal Government relating to the public health and to diseases of animal life.

SEC. 8. That it shall gather data concerning such matters, impose and enforce quarantine regulations; establish chemical, biological, and other standards necessary to the efficient administration of said department, and give due publicity to the same.

SEC. 9. That the Secretary of Public Health shall establish a Bureau of Biology, a Bureau of Chemistry, a Bureau of Veterinary Service, a Bureau of Sanitary Engineering, reporting such proposed organizations to Congress for suitable legislation relative thereto.

SEC. 10. That all unexpended appropriations and appropriations made for the ensuing year shall be available on and after July first, nineteen hundred and ten, for the Department of Public Health, where such appropriations have been made to be used by any branch of the public service transferred by this Act to the Department of Public Health. It shall be the duty of the Secretary of Public Health to provide, on proper requisition, any medical, sanitary, or other service needed of his department required in another department of the Government.

SEC. 11. That any other department requiring medical, surgical, sanitary, or other similar service shall apply to the Secretary of Public Health therefor wherever it is practicable.

SEC. 12. That all officers or employees of the Government transferred by this Act to the Department of Public Health will continue to discharge their present duties under the present organization until July first, nineteen hundred and ten, and after that time until otherwise directed by the Secretary of Public Health or under the operation of law.

SEC. 13. That all laws or parts of laws in conflict with this Act are hereby repealed.

ATTACK ON THE BILL FOR A DEPARTMENT OF PUBLIC HEALTH.

The introduction of the bill by Senator Owen to establish a department of public health, which we publish on another page, has served as an excuse for a new attack upon the American Medical Association by an organization calling itself "The National League for Medical Freedom." That this s a mere attempt to arouse dissensions among the members of the Associations is quite apparent. The attack is of course prompted solely by the organized interests whose business is interfered with by the campaign of the American and the state medical associations to educate the people in methods of protecting themselves from disease and prolong life, since among the things to be avoided in pursuing this course not the least are patent medicines and fakers of all kinds and descriptions. We quote from an editorial in the current issue of the *Journal* of the Americal Medical Association, which throws much light upon the personnel of the "League" and its objects in attacking the bill:

Within the past few days the newspapers of the chief cities of the country have carried large advertisements headed: "Do You Want the 'Doctors' Trust' to be able to Force its Opinions on You?" These advertisements paint in vivid colors—"yellow" predominating—the disaster and general destruction that will follow the formation of a federal department of health. They emanate from, or to be more correct, are signed by, an organization calling itself the "National League for Medical Freedom." In addition to the regular display advertisements, the press agent is supplying matter for the reading pages, and there is every evidence that the propaganda is not lacking financial support. Of course the American Medical Association is the *bête noir* the "league" seeks to kill; it is the "medical trust" referred to. Members of the Association will be surprised to learn that if a national department of health is created it will result in "denying to the people the right to determine for themselves the kind of medical treatment they shall employ." For this reason, and so far as the advertisements state, for this reason only, the National League for Medical Freedom has been brought into being. As a slogan under which the real reasons for organizing may be carefully concealed, it may serve its purpose. Most people prefer to have their thinking done for them and this alone will prevent the absurdity of such a proposition, as that on which the "league" is ostensibly founded, becoming apparent. Yet every person with the most elemental knowledge of our government knows that the regulation of the practice of medicine and the licensing of physicians is a function of the state and that any law attempting to confer such power on a department of the federal government would be unconstitutional. The proposed department of health would have just as much authority to determine what "kind of medical treatment" the people should employ as the Department of Agriculture has to dictate to the farmer regarding the implement company he shall buy his plows of. * * *

To disclose the source of this opposition it is only necessary to call attention to some of the members of the "advissory board"—high-sounding title—as reported in the newspapers, to make reasonably clear to the members

of the American Medical Association the "power behind" the "league." The publisher of the *Medical Standard* and *Western Druggist*, for instance, has long been known as a defender of, and mouthpiece for the "patent medicine" and proprietary interests. His presence on the "advisory board" is fitting, and the only surprising thing about it is that he should have been guilty of such a tactical blunder as getting into the fierce light of publicity.

That the president of the A. D. S. should be on the "board" was to be looked for, and being looked for, is found. And there are others! Among the lesser satellites in this distinguished galaxy are those who very naturally might be expected to enter enthusiastically into such a campaign—the president of an antivivisection society, some "mental healers" and one or two journalists of varying degrees of obscurity. Of the latter, one has for years been strongly opposed to medical organization and more recently has taken up that mental vagary known as "new thought." Taking into consideration both the objects of the "league" and the personnel of its "board" one feels that the New York *Journal* expressed only a half-truth when it said:

"The druggists and the proprietary medicine interests throughout the country are said to be chiefly concerned in defeating the Owen bill."

It would have been nearer the facts if for "defeating the Owen bill" were substituted the clause "attempting to disrupt the American Medical Association." A dozen years ago the public might not have been able to see the animus prompting this attack—to-day it is wiser.

As to the publicity which this sensational and costly campaign will give to the American Medical Association the medical profession may welcome it. One thing that has long been needed is that of directing the attention of the laity to the aims and accomplishments of the American Medical Association. It welcomes investigation—the more the public learns about the work the Association is doing the better for the Association. It has nothing to be ashamed of, but it has a great deal to be proud of; its work in the interests of both public welfare and scientific medicine is and always has been open and above board. The Association needs no defense; it is not only well able to stand on its record, but is proud of that record.

NEW SYSTEM OF HOSPITAL CONTROL IN ST. LOUIS.

The new ordinance governing the control of the hospitals in St. Louis went into effect early in May and the Mayor has appointed the following members of the Hospital Board: Dr. R. L. Thompson, Dr. John B. Shapleigh, Dr. W. John Harris, C. L. Swarts, E. N. Tolcaz and B. F. Gray, Jr.

This board has appointed Dr. John C. Morfit as Hospital Commissioner, who will supervise the conduct of the institutions. A visiting staff of physicians for each hospital will be created later, although the following physicians have already been appointed: Drs. H. G. Mudd, Willis Young, M. G. Seelig, Elsworth Smith, G. C. Crandall and C. J. Luyties. To this list a large number of other physicians will be added from time to time until the staff for each hospital has been completed. Resident physicians and assistant resident physicians have been appointed as follows: City Hospital, resident physician, Dr. W. R. Hewitt; assistants,

Drs. G. L. Quails, C. S. McGinnis, A. Sewing, K. McAlpine, R. W. Chamberlain and E. W. Wippe.

Female Hospital: Resident physician, Dr. J. Rotter; assistants, Drs. T. P. Brooks, W. D. Davis, R. E. Hogan.

Sanitarium: Resident physician, Dr. H. R. Hill; assistants, Drs. D. R. Fish, G. A. Johns and R. F. Belair.

The importance of this departure in the management of the eleemosynary institutions of St. Louis cannot be overestimated. It means far more than a mere change in the method of handling the affairs of the charitable institutions of the city for, if the new system is judicially administered, the business department of the hospitals will be conducted with much greater care and accuracy than was possible under the old system, and patients will receive the most efficient care and treatment that the medical profession of the city can administer. Economically and sociologically, the city and the State will be the gainers and the medical profession will profit through the experience gained in caring for the large number of persons annually treated in these institutions.

THE CONFERENCE OF CHARITIES AND CORRECTIONS.

The thirty-seventh annual session of the Conference on Charities and Corrections was held in St. Louis during the week May 19th to 26th. The keynote of the discussion showed an evidence of a healthy unrest prompted by a sincere spirit of inquiry for truth and facts concerning economic and sociologic conditions. The organization is imbued with a strong impulse to be up and doing, to investigate and learn the causes that lead to human depression and depravity, and to apply practical remedies.

The scope of the work is far-reaching; it embraces the defective and degenerate, of which we have the criminal, the insane and the prostitute; the dependent and delinquent, both child and adult; and those of low moral, social and physical standards.

The search for truth in these matters is destructive to those time-honored methods which have served their usefulness but must now give place to newer ways of dealing with our altered social conditions. It is a reformation but along eminently practical lines. The three points of attack by the Conference are, first, prevention; second, improvement and cure; third, after care. Here are fields of labor for the correction of physical, social, political and moral abnormalities. That the work has been of slow and gradual growth is a proof of its strength; and that the roll of membership is rapidly increasing points unerringly, to its effectiveness for good.

COUNTY SOCIETY NOTES

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

Cape Girardeau County Medical Society held a special meeting, open to the public, on Monday evening, March 7th, in the banquet hall of the St. Charles Hotel to listen to an address by our honored guest, Dr. W. G. Moore, of St. Louis.

The following members were present: Doctors Cunningham, Hays, Henderson, Hope, Howard, Edward Moore, Nettles, Porterfield, Jr., Schulz, Statler, Wichterich, Wilson and Yount.

A banquet was served, after which Dr. W. G. Moore gave an interesting talk showing what had been accomplished through organization and the benefits to be derived through coöperation by the press toward educating the people in proper hygiene. He also spoke of the valuable aid that could be rendered by the clergy.

MEETING OF MARCH 14TH.

The regular meeting was held March 14th at Cape Girardeau with eight members present.

Dr. Cunningham read a paper on "Neurasthenia" and emphasized the importance of treating most cases without drugs. Suggestive methods besides hygienic measures, he thought, would prove more effective.—E. H. G. WILSON, M. D., Secretary.

MEETING OF MAY 5TH.

The regular monthly meeting was held at Jackson, May 5th, with the following members present: Doctors Cunningham, Dalton, Hays, Henderson, Higdon, Hope, Moore, Statler, Vinyard and Wilson.

Program: Cystitis, by Dr. Hays. Mitral Regurgitation, by Dr. Statler. "Infantile Convulsions," by Dr. Higdon.

All papers were well prepared and practical lessons drawn by reports of cases from practice. This was one of the best meetings our society has had for some time.

Dr. Wm. Kiehne, a retired practitioner, died May 5th, and a committee was appointed to present suitable resolutions of condolence at our next meeting. The committee: Doctors Hays, Henderson and Vinyard.

On motion the Society adjourned to meet in Cape Girardeau June 13th.—E. H. G. WILSON, M. D., Secretary.

CARTER-SHANNON COUNTY MEDICAL SOCIETY.

The Carter-Shannon County Medical Society convened at Winona on April 19th, in regular session, at 7:30 p. m., with President Dr. Wm. Fulton in the chair, and the following members present: Drs. Frank Hyde, P. D. Gum, T. W. Cotton, Edward Henschel, and J. A. Chilton.

The routine work, part of which consisted in electing one new member to the Society, and a delegate—Dr. Edward Henschel, with Dr. Frank Hyde as alternate—to the meeting of the State Society to be held at Hannibal, being over, the doors were thrown open to the public, and with an audience of some 300 people, the following program was rendered:

"Hygiene of the School Room," by Prof. Pummill, principal of the Winona public schools. "The House Fly," Dr. Wm. I. Fulton. "Typhoid Fever," Dr. Frank Hyde. "Smallpox," Dr. T. W. Cotton. "Scarlet Fever," Dr. P. D. Gum. "Self Medication," Druggist J. T. Loyd. "Tuberculosis," Dr. J. A. Chilton.

These papers were read and discussed, not only by the doctors, but by many of the citizens, the latter of whom expressed themselves well pleased and highly benefited by the knowledge of the infectious diseases, and how to manage them, that they had gained, and a rising vote of thanks was tendered the members of the Society for its efforts in behalf of public health and sanitation which it was making.

The nature of the papers read by the doctors was educational, and gave to the hearers such knowledge as is most beneficial to the laity for their welfare regarding their coöperation with the profession in securing better means of sanitation, and the control and management of the infectious diseases.

The meeting was an entire success, and highly enjoyed by all present.—J. A. Chilton, M. D., Secretary.

CLINTON COUNTY MEDICAL SOCIETY.

The Clinton County Medical Society held its regular quarterly meeting in Lathrop; the following physicians being in attendance: Dr. John Sturgis, of Perrin; Drs. McDonald, Peters, Gilliland, Jones and Risley, of Cameron; Drs. Steckman and Fulton, of Plattsburg; Drs. Lyle and Frankenburger, of Kansas City, and Drs. Kimsey, Robertson, Longfield and McConkey, of Lathrop.

Following is the program: "Interstitial Keratitis," Dr. C. H. Risley. "The New Statistic Law," Dr. F. H. Fulton. "The Old-Fashioned Girl as Compared to Our Modern Society Belle," Dr. A. W. Robertson. "Rectal Diseases," Dr. J. M. Frankenburger. "Acute Fermental Diarrhœa," Dr. A. D. Gilliland. "Venereal Diseases in the Innocent," Dr. H. M. Lyle. "Care of Contused Wounds," Dr. E. S. McDonald.

All papers were discussed with force and vim, and an excellent meeting resulted.

The following resolutions were adopted:

Whereas, on March 7, 1910, the Great Physician, in his infinite wisdom, called our honored member, Dr. J. O. K. Gant to other fields of labors; therefore, be it

Resolved, That in his death his family has lost a true and devoted husband and father, this Society a worthy, faithful and strictly ethical member, and the State an upright and honored citizen.

Resolved, That we cherish in grateful memory his great work for the profession and his unselfish devotion to this Society.

Resolved, That we bear to his family our sympathy in their great loss. That a copy of these resolutions be sent to the family, a copy be placed upon the minutes of this Society, and a copy be sent the State Journal for publication.

Done by the Clinton County Medical Society, in session in Lathrop on April 12, 1910.

JNO. STURGIS,
F. H. FULTON,
C. M. MCCONKEY,
Committee.

The next meeting will be in open assembly in Plattsburg in July, to which the public will be invited.

COLE COUNTY MEDICAL SOCIETY.

At the meeting of the Cole County Medical Society the following resolutions were adopted in memorial of Dr. J. L. Thorpe:

Dr. Jefferson L. Thorpe, one of the leading physicians of this state who practiced his profession in this city for more than twenty years, died on the 22nd day of March, 1910, after a brief illness at the age of forty-eight years. His was a most useful and honorable life. He was a man of most genial disposition and charitable impulse. He will be most kindly remembered by citizens of every class and most sincerely missed by a host of friends.

Dr. Thorpe was devoted to his profession and fully deserved the high respect accorded to him by this community and the great confidence reposed in him.

Gentle in manner, firm in conviction, a faithful friend, kind and affectionate husband and father, and a worthy member of this association, it is with deep regret we record his death.

We tender our sincere condolance to his family.

Resolved, That a copy of this memorial be sent to his family as a testimonial of our esteem for our departed friend, and that a copy be spread upon the minutes of the association.

CHAS. P. HOUGH,
WM. A. CLARK,
CORTEZ ENLOE,
Committee.

DAVIESS COUNTY MEDICAL SOCIETY.

The Daviess County Medical Society held its regular meeting April 12th, at Gallatin, the following members being present: Drs. Wetzel, Smith, Clagett, Dunham, Hanna, Doolin and Songer.

Dr. A. M. McClung, of Pattonsburg, was elected to membership.

District Counselor Dr. Miller, of Liberty, was with us and gave a very interesting talk on organization.

The next meeting will be held at Pattonsburg, July 12th, at which time all the physicians in the county are urged to be present.—H. E. SONGER, M. D., Reporter.

GREENE COUNTY MEDICAL SOCIETY.

The Greene County Medical Society, at the regular meeting April 22nd, adopted the following resolutions, and the Society voted that they be published in the STATE JOURNAL:

Dr. Jonathan Edwards Tefft was born in Exeter, R. I., on June 22nd, 1836, and died in Springfield on March 25th, 1910. He practiced medicine in Springfield for forty-five (45) years. After attending the Pierce Academy of Middleboro, Mass., he entered the Providence Conference Seminary of East Greenwich, Rhode Island, and later graduated from the Brown University of Providence, R. I. His medical education was obtained in the Medical College of Ohio, Cincinnati, from which institution he was graduated in 1865. In the same year he came to Missouri and took up his residence in Springfield. Drury College conferred upon him the degree of Doctor of Laws. In 1890 he went to London and pursued special studies in Guy's Hospital. Dr. Tefft was Lecturer on Genito-Urinary Surgery in the Medical Department of the University of Missouri, was Senior Surgeon of St. John's Hospital, and consulting surgeon to the Employes' Hospital of the Frisco Railway System. He was president of the Missouri State Medical Association in 1871, was ex-president of the Springfield Medical Society and ex-president of the Southwest Missouri Medical Society. He was a member of the Mississippi Valley Medical Association, the American Medical Association and corresponding member of the St. Louis Medical Society and of the St. Louis Academy of Sciences. Dr. Tefft's first enlistment in the army was in Company "A" of Fremont's Body Guard. This was in the spring of 1862. On the first day of March, 1863, he was mustered in as assistant surgeon of the First Regiment of Arkansas Cavalry, and he was discharged from this last service on the 11th day of January, 1865. He was receiving a pension at the time of his death, based on this last service.

Resolved, That the Greene County Medical Society has lost in the death of Dr. Tefft one of its strongest supports in the advocacy of greater medical achievements and moral rectitude. His aim was ever higher, his advice always encouraging to the younger members to gain the greatest honors attainable in the profession.

Resolved, That while we yield with submission to the will of an inscrutable and allwise Providence that has seen fit to take one of our esteemed members from us, yet we feel that humanity has lost in him an able adviser, and the cause of medicine, his cherished and loved profession, would have been strengthened and benefited by his longer stay among us.

Resolved, That we extend to his family our deepest sympathy in the loss of a loving husband and devoted father.

Resolved, That a copy of these resolutions be spread upon the minutes of the Association, and one also be sent to his family.

W. A. Camp,
J. R. Bartlett,
J. P. Ralston,
W. P. Patterson,
Wm. M. Smith,
Committee.

MEETING OF MAY 13TH.

The Greene County Medical Society met at the Public Library Friday, May 13th, at which time the magnificent library of the late Dr. J. E. Tefft was donated to the Society by the family of the deceased. In the absence of the president, Dr. T. Doolin, Dr. W. A. Camp presided. Captain George M. Jones, in a short but very appropriate address donated the library to the Society, and Dr. W. M. Smith, in response and on behalf of the Society, accepted the gift.

Mrs. W. A. Camp read an original poem on the life of Dr. Tefft. Rev.

Henry Little, a personal friend of the doctor and family, spoke of his life as a student, citizen and surgeon.

Dr. Halley, of Kansas City, in his address, referred to the Doctor as a medical instructor, paying special attention to the active part taken at medical associations.

In the death of Dr. Tefft the Greene County Medical Society has lost one of its most worthy members, and Greene County and Southwest Missouri one of its most honored and influential citizens.—THOS. O. KLINGNER, M. D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY.

Lafayette County Medical Society met at Lexington April 12th, the following members being present: Drs. Clayton and Barclay, of Odessa; Dr. Harwood, of Dover; Drs. J. A. and F. W. Mann, of Wellington; Watts, Napoleon, Schneider, Concordia, Braecklein, Porter and Ott, of Higginsville; Roberts, Chalkley, Cope, Fredendall, Tucker, Fulkerson, Payne and Ryland, of Lexington. Visitors, Dr. T. F. Lockwood, of Butler, and Dr. Wm. J. Frick, of Kansas City. The application of Dr. J. F. Mackey, of Odessa, was received and referred to committee.

Dr. Lockwood read a paper on "A Plea in Behalf of the Unborn." The doctor's paper showed a very careful and thorough study of his subject and was highly entertaining and instructive to all who had the pleasure of hearing it. Discussions by all present followed.

Dr. Frick's paper on "Intussusception" was read in a clear, concise manner and showed a practical scientific knowledge of the subject and was, therefore, very instructive to all the doctors present. This paper was also followed by free discussion from all. To these gentlemen we extend our appreciative thanks.

The regular meeting of the Society was followed by a moving picture demonstration of the fly pest to which the public had been invited. The house was so crowded that a second show was given. These pictures were of more benefit to the audience than a dozen lectures on this subject would have been. The pictures showed the flies laying eggs in putrid meat; the eggs in white masses; the maggots in heaps as they emerge from the eggs; how the maggots burrow in the dirt to enter the pupa state; the pupæ themselves one day later; the fly emerging from the filth, at first wingless, then the perfect adult fly.

A second series of pictures showed "How Flies Carry Contagion." Flies swarming on putrid fish; crawling over lumps of sugar; in a cuspidor; on the nipple of a baby's feeding bottle; and, last of all, a pretty baby sucking the mouth-piece from which the flies have just departed. These pictures should be exhibited all over the state before the public, as well as before schools and scientific bodies in a campaign against the fly.

The next meeting of the Society will be held at Lexington in May.—C. T. RYLAND, M. D., Acting Reporter.

NEWTON COUNTY MEDICAL SOCIETY.

Newton County Medical Society met in regular session on Tuesday, May 10th, with about one-half of the members present. We had a

very good meeting and elected the following officers for the ensuing year: President, Dr. H. L. Porter, Seneca; vice-president, Dr. R. C. Lamson, Neosho; secretary, Dr. O. J. Sloan, Neosho.

Dr. Sloan is a very wide awake young man and will certainly add to the strength and usefulness of our Society. It was decided that we would make a very careful canvass of the county and endeavor to bring every ethical physician in the county under the influence of the County Society. We canvassed the territory during the meeting and found that there are about fifteen physicians eligible for membership who have not joined; there are also several of the old members who have not paid their dues for the current year, but we will keep after them until they are reinstated.

In July the Society will have a banquet after its regular session and every member is urged to come and join in keeping up the spirit of good fellowship and society interest.—HORACE BOWERS, M. D., Secretary.

PIKE COUNTY MEDICAL SOCIETY.

The Pike County Medical Society met at Clarksville on March 27th. Present: Drs. J. L. Davis, T. G. Hetherlin, J. E. Bankhead, E. M. Barlett, Storey, O. K. Edgell and J. W. Dreyfus.

While the meeting was not a large one it proved to be a very profitable and interesting one. Dr. Storey read a most excellent paper upon the subject of "Heredity," which was freely discussed. There were other papers due but in the absence of the essayists the time was used in discussing many other subjects and phases of medicine.—J. W. DREYFUS, M. D., Assistant Secretary.

PLATTE COUNTY MEDICAL SOCIETY.

Platte County Medical Society convened April 6th, at Platte City. Members present: Drs. Yokum, Clark, Redman, Coffey, Herndon, Carter, Hull. Visitor, Dr. Harrel, of Kentucky. After the regular order of business papers were read as follows:

Lacerations of the Perineum, by Dr. Carter. Discussion opened by Dr. Yokum. This was a very able paper and received much comment by those present.

The Physiology of the Female Generative Organs, by Dr. Yokum. This subject was presented with much preparation and was very ably discussed by those present.

The Society tendered a vote of thanks to Dr. Harrel, of Kentucky, in appreciation of his very able toast which closed the scene.

Sufferings of Womankind Through False Modesty—a Remedy, was very ably presented by President Dr. G. C. Coffey, and was received with much interest and extensive debate.

There being no further business the Society adjourned until the next regular meeting, May 11th, at Platte City. This will be a public meeting held at the court house. The program follows:

10:30 A. M.

School Hygiene.....Dr. J. M. Hale, Dearborn
Discussion opened by Prof. J. F. Sexton, County Superintendent Public Schools, Platte City.

1:30 P. M.

What the Medical Profession is Doing to Prevent Disease and Some Ways in Which the Public Can Assist.....
.....Dr. Spence Redman, Platte City
Discussion opened by Senator N. B. Anderson, Platte City.
The Public Health Problem, Both National and State.....

Dr. Tinsley Brown, President Missouri State Medical Assn.; Hamilton Organization of County Anti-Tuberculosis Society.

MEETING OF MAY 11TH.

Platte County Medical Society held its regular meeting at Platte City on May 11th. This being an open meeting the public was invited to attend and a large audience was present. The program consisted of papers that were calculated to instruct the people in the methods of preventing disease and promoting good hygienic conditions in private and public life. The following papers were read:

"What the Medical Profession is Doing to Prevent Disease and Some Ways in Which the Public Can Assist," by Dr. Spence Redman, of Platte City. The discussion on this paper was opened by Senator N. B. Anderson. "The Public Health Problem, Both National and State," by Dr. Tinsley Brown, President Missouri State Medical Association. The organization of a county anti-tuberculosis society was inagurated and Senator Anderson was chosen chairman, and E. R. Hull, M. D., secretary, *pro tem.*

These papers were well received and aroused a good deal of favorable comment as well as causing the people to have a better understanding of the real objects of the organized profession in its effort to protect the public against disease.

Dr. George R. Dagg, of Barry, was received as a member by election and Dr. A. R. Mitchell, of Edgerton, received by transfer from Clinton County. We are glad to have these gentlemen with us. Every ethical practicing physician in Platte County can and should become a member of the county society.

Members present: Drs. A. H. Moore, H. M. Clark, F. M. Shafer, Spence Redman, L. A. Shafer, E. R. Hull. Visitors: Drs. Tinsley Brown, of Hamilton, ex-President of the State Association, and Dr. Harrel, of Kentucky.—E. R. HULL, M. D., Secretary.

PULASKI COUNTY MEDICAL SOCIETY.

The Pulaski County Medical Society met April 28th, 1910, in the office of Dr. Von Gremp at Dixon. Dr. McCulley in a very interesting manner encouraged the idea of having joint meetings between Camden, Laclede and Pulaski counties.

Dr. Rolens addressed the Society on the advantages to each physician and the local registrar in vital statistics reports being sent in promptly. Dr. Von Gremp gave a very interesting talk on the advantages to be gained by every physician in the county being a member of the County and State Societies.—EVERTT A. OLIVER, M. D., Secretary.

RALLS COUNTY MEDICAL SOCIETY.

The Ralls County Medical Society held regular meeting at New London on April 14th, morning and evening sessions. Present: Dr. W. S. Harwood, of Rensselaer; Dr. W. L. Birney, of Oak Wood; Drs. C. H. Graves and Wm. Birney, of Center; Drs. W. G. Hendrix, W. T. Waters, and T. J. Downing, of New London. Visitors: Drs. R. H. Goodier, J. E. Hill, E. H. Bounds, and R. M. Winn, of Hannibal; Drs. J. J. Kennedy and R. W. Burns, of Frankford; Dr. F. E. Walters, of Bowling Green, and Drs. J. A. and T. H. Welsch, of Center.

The program. Paper, "Vital Statistics and the Local Registrar," by Dr. W. L. Birney. Deferred to next meeting.

Paper: Dr. W. T. Waters read in happy vein a very entertaining and instructive paper, the subject of which was "Yarbs." In the discussion following the "lay-brother" did *not* have his "inning."

The Nestor of the Ralls County Society, and the oldest, save one, of the doctors of the county, Dr. W. G. Hendrix, sitting, read by request a paper, "In Support of the Code." Much interest was manifested, and a lively discussion followed the reading of this paper. The code is old, but then the doctor is too.

Question: How long should quarantine run after an attack of diphtheria? In answer to this question, the opinions varied from one week to three weeks. It was brought out that children having light and unsuspected attacks of diphtheria, not sick enough to call the doctor, are a greater factor in scattering diphtheria, than even the convalescent, especially when the latter has been treated properly, that is, with the earliest possible administration of sufficient antitoxin.

It is possible that this was the most *lively* and *exciting,* if not the best, meeting in the history of the Ralls County Medical Society.—T. J. Downing, M. D., Secretary.

STODDARD COUNTY MEDICAL SOCIETY.

The Stoddard County Medical Society met in quarterly session at Bloomfield, Wednesday, April 6th, with President G. W. Vernon and nine other members present.

Dr. Vernon read a very able and exhaustive paper on "Medical Treatment of the Insane," which called forth a general discussion.

The next meeting, at Bernie, will be held the 20th day of July and will be devoted to surgical subjects.

Dr. Charles Moore, of Advance, was elected to membership.—T. C. Allen, M. D., Reporter.

ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society met in the Empire Building Webster Groves, on Wednesday, May 11th.

Dr. R. D. Moore of Central, delegate to the State Association, gave an interesting and complete report of the meeting held in Hannibal. In closing he made a plea for a better attendance on the part of our Society at the State meetings.

Dr. Grindon, of St. Louis, visited us and gave a brief history of the Missouri State Medical Association. He urged each member to try to be present next year.

The program: Diagnostic Therapeutic Importance of Attention to the Scalp, by Dr. Joseph Grindon of St. Louis. Dr. Grindon's humorous but scientific paper produced many ripples of mirth as well as thought, and brought out a volley of questions, especially from those whose heads are fast assuming the topographical aspect of the billard ball. The Society extended a vote of thanks the Dr. Grindon for his kindness in giving us so instructive a paper.

Dr. W. E. Metcalf of Maplewood, read a paper on Asthma. Owing to the lateness of the hour discussion was deferred until the next meeting.

Members present: Doctors Cape, Jensen, Moore, Miles, Reynolds, Carter, Guibor, Maisch, Mills, Townsend, J. Armstrong, Baker, Koch, Pitman, C. Armstrong, Metcalf, and Prossard. Visitors: Dr. Joseph Grindon of St. Louis.

The Society adjourned to meet in Webster Groves on Wednesday, June 8th, 1910, at 2:30 p. m.—P. M. Brossard, M. D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY.

Schuyler County Medical Society held its regular meeting in Glenwood.

Members present: Doctors T. B. Farrington, W. H. Zeber, W. B. Hight, W. F. Justise, B. B. Potter, E. L. Mitchell, A. J. Drake, J. B. Bridges, J. H. Keller and H. E. Gerwig.

Application for membership: Dr. W. F. Justise.

Dr. J. H. Rambo read a paper on Puerperal Eclampsia which was discussed by all members present.

Dr. Hight presented a very able paper on Appendicits which was thoroughly discussed. Quite a number of interesting cases were reported.

There being no further business we adjourned to meet in Queen City, June 1st, 1910.—H. E. Gerwig, M. D., Secretary.

SHELBY COUNTY MEDICAL SOCIETY.

The Shelby County Medical Society met in Dr. Vaughn's office at Shelbina, April 1st. Clinical cases were reported by Drs. Owen and Pollard and were well discussed.

The Vital Statistics Law was the main topic for discussion. While the principles of the law were advocated by all, the working of such law did not meet the approval of the Society, because of its complexity and especially the trouble of those doctors who are so located that their work is in two or even three counties.

A committee was appointed to draft resolutions on the death of Dr. H. T. Willis.

Drs. Hanger and Musgrave, of Clarence, were elected as members.

The membership is now larger than ever before; only four doctors in the county are not enrolled.

President Owen appealed to all who could do so to attend the State meeting.

Members present: Drs. Owen, Pollard, Vaughn, Smith, Pollard, Ferguson, Daniel, Hanger, Musgrave, Carson, Wood.—A. M. Wood, M. D., Reporter.

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